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As filed with the Securities and Exchange Commission on April 6, 2015.

Registration No. 333-202667

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

Amendment No. 1
to
FORM S-1
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

ADURO BIOTECH, INC.

(Exact name of Registrant as specified in its charter)

Delaware	2834	94-3348934
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

626 Bancroft Way, 3C
Berkeley, California 94710
(510) 848-4400
(Address, including zip code and telephone number, of Registrant's principal executive offices)

Stephen T. Isaacs
Chairman, President and Chief Executive Officer
Aduro Biotech, Inc.
626 Bancroft Way, 3C
Berkeley, California 94710
(510) 848-4400
(Name, address, including zip code and telephone number, including area code, of agent for service)

Copies to:

Barbara A. Kosacz **Michael E. Tenta** **Cooley LLP** **3175 Hanover Street** **Palo Alto, California 94304** **(650) 843-5000**	**Alan C. Mendelson** **Mark V. Roeder** **Latham & Watkins LLP** **140 Scott Drive** **Menlo Park, California 94025** **(650) 328-4600**

Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act, check the following box. ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☒ (Do not check if a smaller reporting company)	Smaller reporting company	☐

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered(1)(2)	Proposed Maximum Aggregate Offering Price Per Share(2)	Proposed Maximum Aggregate Offering Price(1)(2)	Amount of Registration Fee(3)
Common Stock, $0.0001 par value per share	5,750,000	$16.00	$92,000,000	$10,691

(1) Includes 750,000 shares of common stock that the underwriters have the option to purchase.
(2) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(a) under the Securities Act of 1933, as amended.
(3) The registrant previously paid $10,022.25 in connection with the initial filing of the registration statement. In accordance with Rule 457(a), an additional registration fee of $669 is being paid with this amendment to the registration statement.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission acting pursuant to said Section 8(a), may determine.

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The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject To Completion.
Preliminary Prospectus dated April 6, 2015.

PROSPECTUS

5,000,000 Shares

Common Stock

This is an initial public offering of shares of common stock of Aduro Biotech, Inc. We are selling 5,000,000 shares of our common stock in this offering.

We expect the public offering price to be between $14.00 and $16.00 per share. Currently, no public market exists for the shares. After pricing of the offering, we expect the shares will trade on the NASDAQ Global Market under the symbol "ADRO."

We are an "emerging growth company" under applicable Securities and Exchange Commission rules and will be subject to reduced public company reporting requirements.

Investing in our common stock involves risks that are described in the "Risk Factors" section beginning on page 12 of this prospectus.

	Per Share	Total
Public offering price	$	$
Underwriting discount(1)	$	$
Proceeds to us, before expenses	$	$

(1) We refer you to "Underwriting" beginning on page 164 for additional information regarding total underwriting compensation.

The underwriters may also exercise their option to purchase up to an additional shares from us, at the public offering price, less the underwriting discount for 30 days after the date of this prospectus.

Johnson & Johnson Development Corporation, an existing stockholder, has indicated an interest in purchasing up to approximately $30.0 million of shares of our common stock in this offering at the initial public offering price. Certain other of our existing stockholders, including stockholders affiliated with our directors, have indicated an interest in purchasing up to an additional approximately $12.5 million of shares of our common stock in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters may determine to sell more, fewer or no shares in this offering to any of these parties, or any of these parties may determine to purchase more, fewer or no shares in this offering.

In addition, Novartis Institutes for BioMedical Research, Inc., an existing stockholder and an affiliate of Novartis Pharmaceuticals Corporation, a collaboration partner, has entered into a stock purchase agreement with us to purchase approximately $25.0 million of shares of our common stock at a price per share equal to the initial public offering price in a separate private placement transaction that would close concurrently with this offering. The sale of such shares will not be registered under the Securities Act of 1933, as amended. The closing of this offering is not conditioned upon the closing of such concurrent private placement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The shares will be ready for delivery on or about , 2015.

BofA Merrill Lynch **Leerink Partners**

William Blair **Canaccord Genuity**

The date of this prospectus , 2015.

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Neither we nor the underwriters have authorized anyone to provide you with any information or to make any representation, other than those contained in this prospectus or any free writing prospectus we have prepared. We take no responsibility for, and provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the shares offered hereby, but only in circumstances and in jurisdictions where it is lawful to so do. The information contained in this prospectus is accurate only as of its date, regardless of the time of delivery of this prospectus or of any sale of our common stock.

Neither we nor any of the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than the United States. You are required to inform yourself about, and to observe any restrictions relating to, this offering and the distribution of this prospectus.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our common stock, you should read the entire prospectus carefully, including the sections titled "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our financial statements and related notes included elsewhere in this prospectus. Unless the context suggests otherwise, references in this prospectus to "Aduro," "Aduro Biotech," "we," "us" and "our" refer to Aduro Biotech, Inc.

ADURO BIOTECH, INC.

Overview

We are a clinical-stage immuno-oncology company focused on the development of first-in-class technology platforms designed to stimulate robust and durable immune responses against cancer, and our lead product candidate is in a randomized controlled Phase 2b clinical trial in metastatic pancreatic cancer. Immuno-oncology encompasses a class of therapies that leverage the patient's immune system to slow the growth and spread of, or eliminate, tumor cells. We believe a critical distinguishing factor in our approach to immuno-oncology is that our novel therapies initiate powerful innate immune responses and drive targeted, durable adaptive immune responses. The immunotherapy field is rapidly advancing with new immuno-oncology combinations that focus on strengthening therapeutic efficacy in a wide range of cancers. We intend to pursue a broad strategy of combining our technology platforms with conventional and novel immuno-oncology therapies, based on their mechanisms of action, safety profiles and versatility. Our pipeline of immuno-oncology product candidates is derived from two proprietary technology platforms: Live, Attenuated, Double-Deleted, or LADD, *Listeria monocytogenes* and cyclic dinucleotides, or CDNs. Our lead LADD product candidate, CRS-207, is currently being developed in metastatic pancreatic cancer and unresectable malignant pleural mesothelioma. In a completed randomized controlled Phase 2a clinical trial in metastatic pancreatic cancer patients, CRS-207 demonstrated a statistically significant improvement in overall survival when combined with GVAX Pancreas, a cellular vaccine product candidate. The 93-patient two-arm Phase 2a clinical trial was designed to compare the combination of CRS-207 and GVAX Pancreas versus GVAX Pancreas alone. The trial met the primary efficacy endpoint of overall survival at an interim analysis and was stopped upon recommendation from the Data Monitoring Committee. Based on the data from this study, our lead immuno-oncology regimen of CRS-207 and GVAX Pancreas was granted Breakthrough Therapy designation by the U.S. Food and Drug Administration, or FDA. Breakthrough Therapy designation is intended to expedite the development and review of products that treat serious or life-threatening conditions. We have obtained orphan drug designations from the FDA for CRS-207 and GVAX Pancreas for the treatment of pancreatic cancer and for CRS-207 for the treatment of mesothelioma. Under the Orphan Drug Act, the FDA may grant orphan drug designation to a drug or biologic intended to treat a rare disease or condition. Orphan drug designation entitles a party to certain financial incentives and can provide limited market exclusivity in certain circumstances. We are developing a pipeline of proprietary product candidates, including two product candidates in collaboration with Janssen Biotech, Inc., or Janssen, targeting prostate and lung cancers. In addition, we established a worldwide collaboration with Novartis Pharmaceuticals Corporation, or Novartis, for CDN product candidates in oncology. We have intellectual property protection on both of our technology platforms and each of our product candidates, which we believe we will maintain into the 2030s.

Immuno-oncology is an emerging field of cancer therapy that aims to activate the immune system in the tumor microenvironment to create and enhance anti-tumor immune responses, as well as to overcome the immuno-suppressive mechanisms that cancer cells have developed against the immune system. Recent developments in the field of immuno-oncology, including checkpoint inhibitors—therapies that have mechanisms focused on unmasking hidden cancer cells—have shown the potential to provide dramatic efficacy responses and extended survival, even in cancers where conventional therapies, such as surgery, chemotherapy and radiotherapy, have failed.

Product candidates from our two immuno-oncology technology platforms are engineered to prime and enhance a patient's innate and tumor-specific adaptive immune responses to deliver enhanced efficacy over current therapies. Since our product candidates act by stimulating the patient's own immune system, we believe they have the potential to be safer and more tolerable than existing therapies, such as chemotherapy and radiotherapy. Based on the mechanism of action and safety profile of our technology platforms, we intend to build a deep pipeline of LADD- and CDN-based product candidates that can be readily combinable and synergistic with both conventional and novel therapies, such as checkpoint inhibitors.

Our vision is to leverage our scientific expertise and understanding of the body's natural defense systems, including the interplay between the innate and adaptive immune responses, to develop safe and effective therapies for the benefit of patients.

Our Proprietary Technology Platforms and Pipeline

Live, Attenuated, Double-Deleted Listeria Monocytogenes

Our proprietary LADD product candidates have been engineered for safety and optimal efficacy. We seek to optimize tumor-specific immune responses by engineering our LADD product candidates to express encoded tumor-specific antigens and deliver them to antigen-presenting cells. Antigen-presenting cells, which include dendritic cells, lead to efficient priming of a class of immune cells known as T cells. Once primed, these T cells seek out and eliminate the targeted tumor cells. Our LADD product candidates have been engineered for safety in humans through the deletion of two genes critical for virulence of unmodified *Listeria*: *actA* and *inlB*. The deletion of the *actA* gene prevents the spread of our LADD product candidates from cell to cell, which controls the spread of infection. The deletion of the *inlB* gene prevents the infection of hepatocytes, or liver cells, which can lead to toxicity. We believe key attributes of our LADD technology platform include:

- *Early Evidence of Efficacy.* Our randomized controlled Phase 2a clinical trial in patients with metastatic pancreatic cancer who had received or refused prior therapy demonstrated improved overall survival.
- *Novel Mechanism.* Our LADD product candidates are designed to initiate a powerful innate immune response and drive a targeted, durable adaptive immune response.
- *Early Evidence of Safety in Preclinical Studies and Clinical Trials.* Through our proprietary deletion of two genes that contribute to *Listeria*'s virulence, we substantially reduce the natural disease-causing properties of *Listeria*, creating stable product candidates suitable for therapeutic use.
- *Versatility.* Individual LADD product candidates can be engineered to target a wide range of cancers by promoting anti-tumor immune responses against antigens associated with specific tumors.
- *Combinability*. The mechanisms of action and safety profile of our LADD product candidates may give them the potential for combination with conventional and novel therapies, such as cellular vaccines, chemotherapy, radiotherapy and checkpoint inhibitors, among others.
- *Repeatable Administration.* Our LADD product candidates are not neutralized by the patient's immune system and are designed for repeat administration, thus allowing a chronic therapy for a sustained tumor antigen-specific response.
- *Cost-effectiveness.* Our LADD product candidates are not personalized for each patient and can be manufactured through a relatively simple and cost-effective fermentation process.

Cyclic Dinucleotides

Our proprietary CDN product candidates are synthetic small molecule immune modulators that are designed to target and activate a receptor known as the Stimulator of Interferon Genes, or STING, receptor. Once activated, the STING receptor initiates a profound innate immune response by signaling through three distinct pathways, inducing the expression of a broad profile of cytokines that activate the development of an effective tumor antigen-specific T cell adaptive immune response. The STING receptor is generally expressed at high levels in the cytosol of immune cells, including dendritic cells. Recent advancements reported in numerous leading scientific journals have created interest in the potential for STING receptor-targeting drug candidates across diverse applications. We believe the STING receptor represents an attractive target for novel drug candidates because it is known to be critical for immune surveillance and control of cancer progression. We are developing CDN product candidates as therapies that are intended to prime and enhance the innate and adaptive immune responses. Our proprietary synthetic CDN product candidates are significantly more potent than naturally occurring CDN molecules, indicating high translational potential as a therapeutic approach to elicit an effective immune response. We believe key attributes of our CDN technology platform include:

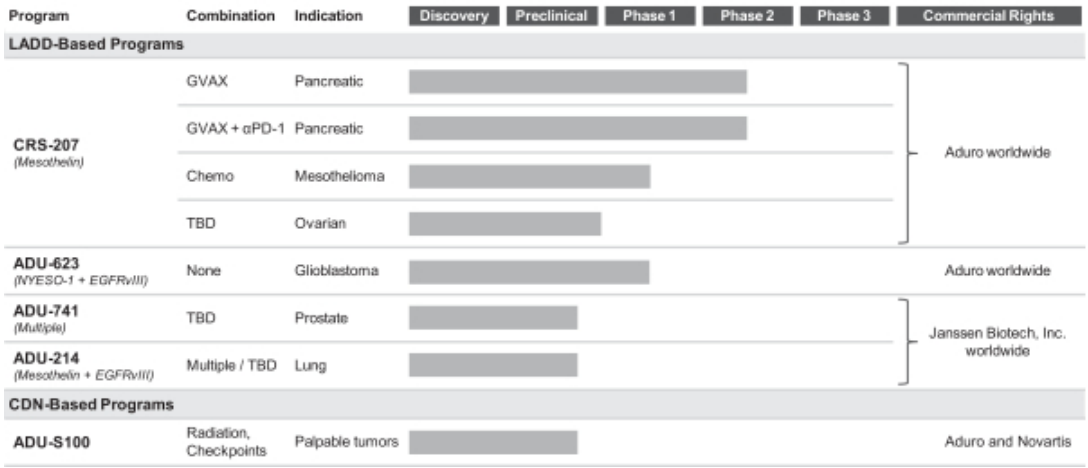
- *Early Evidence of Potency.* Our CDN product candidates have demonstrated significant anti-tumor activity in pre-clinical studies.
- *Novel Mechanism.* Our CDN product candidates are designed to initiate broad and strong innate and adaptive immune responses through the activation of the STING receptor signaling pathway.
- *Versatility of Delivery*. We believe our CDN product candidates can be effectively delivered via intratumoral injection, systemic delivery via formulation and other novel modalities, such as conjugation with antibodies.
- *Combinability*. Based on their mechanism of action, we believe our CDN product candidates may have synergistic or additive benefits of immune-mediated tumor killing mechanisms when combined with conventional and novel therapies, such as cellular vaccines, chemotherapy, radiotherapy and checkpoint inhibitors, among others.
- *Ease of Manufacture*. Our CDN product candidates are small molecules manufactured through a relatively simple and cost-effective process.
- *Broad Applicability*. We believe our CDN product candidates will have broad application in oncology and the potential to expand into other therapeutic areas such as infectious and autoimmune diseases.

Pipeline

Our most advanced immuno-oncology regimen, currently in a randomized controlled Phase 2b clinical trial known as ECLIPSE, assesses the combination of our lead LADD product candidate, CRS-207, with GVAX Pancreas to treat late-stage metastatic pancreatic cancer patients who have received at least one prior line of therapy. GVAX Pancreas is an important synergistic combination candidate because it is designed to induce T cells against an array of pancreatic cancer antigens and enable a broad-based immune response and has demonstrated a favorable safety profile in clinical trials to date. We expect to report top line results from ECLIPSE in the first half of 2016. In addition, we are evaluating CRS-207 in combination with chemotherapy in unresectable malignant pleural mesothelioma and have a planned study of CRS-207 in combination with GVAX Pancreas and an anti-PD-1 checkpoint inhibitor in metastatic pancreatic cancer. We also have ongoing and planned clinical development programs evaluating LADD regimens for glioblastoma multiforme and ovarian cancer, and collaborations with Janssen for lung and prostate cancers.

We also envision multiple product opportunities for our CDN technology platform. Because STING receptors are known to be critical for immune surveillance and control of cancer progression, we believe that STING receptors represent an attractive target for novel drug candidates. We are developing our CDN product candidates as impactful therapies that are intended to prime and enhance the innate and adaptive immune responses. Based on their mechanism of action, our CDN product candidates may also have synergistic or additive benefits when combined with other cancer therapies.

Our pipeline of product candidates is depicted in the following chart:



Our Strategy

Our current focus is to develop and commercialize best-in-class cancer therapies using our LADD and CDN technology platforms. Key elements of our strategy include:

- **Rapidly advance CRS-207 through clinical development and regulatory approval.** We are currently conducting our Phase 2b ECLIPSE clinical trial of CRS-207 in combination with GVAX Pancreas in patients with metastatic pancreatic cancer who have received at least one prior line of therapy. We expect to complete enrollment in the third quarter of 2015 and to report top line results in the first half of 2016.

- **Maximize the commercial value of our proprietary LADD and CDN technology platforms.** We currently have global development, marketing and commercialization rights for our lead product candidate, CRS-207, as well as additional LADD product candidates. If we obtain regulatory approvals for CRS-207 in pancreatic cancer or other indications, we plan to build a commercial organization with a specialty sales force to market CRS-207. We also plan to retain commercial rights to additional LADD product candidates. In addition, we established a worldwide collaboration with Novartis for CDN product candidates in oncology. We also maintain worldwide rights to our CDN technology platform outside of oncology.

- **Develop novel drug candidates by leveraging our proprietary technology platforms and our understanding of combination therapy in immuno-oncology.** We have proprietary technology platforms that we believe can generate novel and combinable therapies to target a wide range of cancers with significant unmet medical need. We plan to invest in these technology platforms to develop additional product candidates. We intend to further explore combination opportunities with conventional and novel treatments, including cellular vaccines, chemotherapy, radiotherapy and checkpoint inhibitors, among others.

- **Expand on the value of our product candidates through collaborations.** We may decide to selectively partner large and complex oncology indications, in certain geographies and where we believe a partner could bring additional resources and expertise to maximize the value of our product candidates. We entered into two strategic collaborations with Janssen for the treatment of prostate, lung and certain other cancers. We also established a worldwide development and commercialization collaboration with Novartis for CDN product candidates in oncology. We believe these collaborations have the potential to drive significant value through the extensive capabilities of these organizations.

- **Leverage the expertise of our scientific founders and key advisors to develop innovative technologies at the forefront of the immuno-oncology field.** Our scientific founders and advisors are from some of the world's leading research institutions and have a history of seminal discoveries and significant experience in oncology, immuno-oncology and vaccines. As such, we plan to continue to leverage the collective talent of our scientists, clinicians and a network of highly influential advisors to inform our development strategy and enable our technology to be at the forefront of the immuno-oncology field. We strive to protect our commercially important discoveries and product candidates by applying for, maintaining and defending our patent rights. At March 31, 2015, our owned U.S. patent portfolio consisted of 21 issued patents and 14 pending patent applications.

Risks Associated with Our Business

Our business is subject to numerous risks and uncertainties, including those highlighted in the section titled "Risk Factors" immediately following this prospectus summary. Some of these risks are:

- We have incurred net losses in every year since our inception and anticipate that we will continue to incur substantial and increasing net losses in the foreseeable future. We will require substantial additional financing to achieve our goals, and a failure to obtain this necessary capital when needed could force us to delay, limit, reduce or terminate our product development or commercialization efforts.

- Our business is highly dependent on the success of our lead product candidate, CRS-207, and GVAX Pancreas. CRS-207, GVAX Pancreas and our other product candidates will require significant additional clinical testing before we can seek regulatory approval and potentially launch commercial sales.

- Clinical development involves a lengthy and expensive process with uncertain outcomes, and results of earlier studies and trials may not be predictive of future clinical trial results.

- Our technology platforms and product candidates are based on novel technologies, and the development and regulatory approval pathways for such product candidates are unproven and may never lead to marketable products.

- Our product candidates may cause undesirable side effects or have other properties that could halt their clinical development, prevent their regulatory approval, limit their commercial potential, if approved, or result in significant negative consequences.

- If we are unable to protect our intellectual property rights or if our intellectual property rights are inadequate for our technology and product candidates, our competitive position could be harmed.

- We face significant competition from other biotechnology and pharmaceutical companies, and our operating results will suffer if we fail to compete effectively.

- We are subject to a complicated regulatory regime subject to change and may fail to obtain regulatory approval for any of our product candidates.

Concurrent Private Placement

Novartis Institutes for BioMedical Research, Inc., or NIBR, an existing stockholder and an affiliate of Novartis, a collaboration partner, has entered into a stock purchase agreement with us to purchase approximately $25.0 million of shares of our common stock at the initial public offering price in a separate private placement transaction that would close concurrently with this offering. The sale of such shares will not be registered under the Securities Act of 1933, as amended. The closing of this offering is not conditioned upon the closing of such concurrent private placement.

Financial Update

While we have not finalized our financial results for the quarter ended March 31, 2015, we expect to report that we had approximately $133.0 million of cash and cash equivalents as of March 31, 2015, which included NIBR's purchase of $25.0 million of Series E convertible preferred stock. In addition, we received $200.0 million from Novartis on April 2, 2015, representing the upfront payment associated with our collaboration agreement with Novartis. The March 31, 2015 expected cash balance is preliminary and is subject to change upon completion of our procedures to prepare the consolidated financial statements as of and for the quarter ended March 31, 2015. Additional information and disclosures would be required for a more complete understanding of our financial position and results of operations as of March 31, 2015.

Corporate Information

We were incorporated in California as Oncologic, Inc. in 2000. In 2008, we merged with Triton BioSystems, Inc. and subsequently changed our name to Aduro Biotech, Inc. in 2009. In June 2011, we reincorporated as a Delaware corporation. Our principal executive offices are located at 626 Bancroft Way, 3C, Berkeley, California 94710 and our telephone number is (510) 848-4400. Our website address is www.aduro.com. Information contained on or accessible through our website is not a part of this prospectus and should not be relied upon in determining whether to make an investment decision.

Aduro, Aduro Biotech, the Aduro logo and other trade names, trademarks or service marks of Aduro appearing in this prospectus are the property of Aduro. Trade names, trademarks and service marks of other companies appearing in this prospectus are the property of their respective holders.

JOBS Act

We are an "emerging growth company" as defined in the Jumpstart Our Business Startups Act, or the JOBS Act, and therefore we may take advantage of certain exemptions from various public company reporting requirements, including not being required to have our internal control over financial reporting audited by our independent registered public accounting firm pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and any golden parachute payments. We may take advantage of these exemptions until we are no longer an "emerging growth company." We may remain an "emerging growth company" for up to five years. We will cease to be an "emerging growth company" upon the earliest of: (1) the last day of the fiscal year following the fifth anniversary of this offering, (2) the last day of the first fiscal year in which our annual gross revenues are $1.0 billion or more, (3) the date on which we have, during the previous rolling three-year period, issued more than $1.0 billion in non-convertible debt securities, and (4) the date on which we are deemed to be a "large accelerated filer" as defined in the Securities Exchange Act of 1934, as amended, or the Exchange Act. We are choosing to irrevocably opt out of the extended transition periods available under the JOBS Act for complying with new or revised accounting standards.

THE OFFERING	
Common stock offered by us	5,000,000 shares.
Common stock to be outstanding after this offering and the concurrent private placement	57,146,582 shares.
Underwriters' option to purchase additional shares	750,000 shares.
Use of proceeds	We estimate that our net proceeds from this offering, excluding the proceeds from the concurrent private placement, will be approximately $66.8 million, or approximately $77.2 million if the underwriters exercise in full their option to purchase additional shares of our common stock, based on an assumed initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the underwriting discount and estimated offering expenses payable by us. Our net proceeds from the concurrent private placement will be $25.0 million. We intend to use the net proceeds from this offering and the concurrent private placement, together with our existing cash and cash equivalents, to complete our Phase 2b ECLIPSE and STELLAR clinical trials, to advance the development of CRS-207 in pancreatic cancer and mesothelioma, and for planned clinical development programs evaluating LADD regimens for glioblastoma multiforme and ovarian cancer, to manufacture CRS-207 and GVAX Pancreas at commercial scale in preparation for potential regulatory approval, for other planned research and development programs involving our LADD and CDN platforms, and for general corporate and working capital purposes. See "Use of Proceeds" for additional information.
Risk factors	See "Risk Factors" beginning on page 12 and the other information included in this prospectus for a discussion of factors you should carefully consider before deciding to invest in our common stock.
Reserved Share Program	At our request, the underwriters have reserved for sale, at the initial public offering price, up to 250,000 shares offered by this prospectus for sale to certain of our directors, officers, employees, business associates and related persons through a Reserved Share Program. If these persons purchase reserved shares it will reduce the number of shares available for sale to the general public. Any reserved shares that are not so purchased will be offered by the underwriters to the general public on the same terms as the other shares offered by this prospectus.
Proposed NASDAQ Global Market symbol	"ADRO"

The number of shares of common stock to be outstanding after this offering and the concurrent private placement is based on 50,479,916 shares of our common stock (including preferred stock on an as-converted to common stock basis) outstanding at December 31, 2014, and excludes the following:

- 1,699,940 shares of common stock issuable upon the conversion of Series E convertible preferred stock issued after December 31, 2014;
- 5,970,382 shares of common stock issuable upon the exercise of outstanding stock options at December 31, 2014, with a weighted-average exercise price of $0.80 per share;
- 3,181,929 shares of common stock issuable upon the exercise of outstanding options that were granted after December 31, 2014, with a weighted-average exercise price of $1.82 per share;
- 77,755 shares of common stock issuable upon the exercise of preferred stock warrants at December 31, 2014, with a weighted-average exercise price of $1.69 per share;
- 1,154,270 shares of common stock issuable upon the exercise of outstanding common stock warrants at December 31, 2014, with a weighted-average exercise price of $0.25 per share;
- 332,826 shares of common stock reserved for future issuance under our 2009 Stock Plan, which will become available for issuance under our 2015 Equity Incentive Plan, or 2015 Plan, after consummation of this offering;
- 6,134,292 shares of common stock, subject to increase on an annual basis, reserved for future issuance under our 2015 Plan, which will become effective immediately prior to the consummation of this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this benefit plan; and
- 720,000 shares of common stock to be reserved for issuance under our 2015 Employee Stock Purchase Plan, which will become effective immediately prior to the consummation of this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this benefit plan.

In addition, unless we specifically state otherwise, all information in this prospectus assumes:

- the automatic conversion of all outstanding shares of our preferred stock at December 31, 2014 into an aggregate of 50,117,919 shares of common stock upon the closing of this offering;
- the automatic conversion of all outstanding warrants exercisable for shares of our preferred stock at December 31, 2014 into warrants exercisable for 77,755 shares of our common stock upon the closing of this offering;
- the filing and effectiveness of our amended and restated certificate of incorporation in Delaware and the adoption of our amended and restated bylaws, each of which will occur immediately following the completion of this offering;
- no exercise of outstanding stock options or warrants subsequent to December 31, 2014; and
- no exercise of the underwriters' option to purchase up to an additional 750,000 shares of common stock.

On April 1, 2015, we effected a 0.72-for-1 reverse split of its common stock. Upon the effectiveness of the reverse stock split, (i) every 1 share of outstanding common stock was combined into 0.72 of a share of common stock, (ii) the number of shares of common stock for which each outstanding option or warrant to purchase common stock is exercisable was proportionally decreased on a 0.72-for-1 basis, (iii) the exercise price of each outstanding option or warrant to purchase common stock was proportionately increased on a 0.72-for-1 basis, and (iv) the conversion ratio for each share of preferred stock which is convertible into our common stock was proportionately reduced on a 0.72-for-1 basis. All of the outstanding common stock share numbers (including shares of common stock into which our outstanding preferred stock shares are convertible), warrants, share prices, exercise prices and per share amounts have been adjusted in this prospectus, on a retroactive basis, to reflect this 0.72-for-1 reverse stock split for all periods presented. The par value per share and the authorized number of shares of common stock and preferred stock were not adjusted as a result of the reverse stock split.

Johnson & Johnson Development Corporation, or JJDC, an existing stockholder, has indicated an interest in purchasing up to approximately $30.0 million of shares of our common stock in this offering at the initial public offering price. Certain other of our existing stockholders, including stockholders affiliated with our directors, have indicated an interest in purchasing up to an additional approximately $12.5 million of shares of our common stock in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters may determine to sell more, fewer or no shares in this offering to any of these parties, or any of these parties may determine to purchase more, fewer or no shares in this offering.

SUMMARY CONSOLIDATED FINANCIAL DATA

The following tables summarize our consolidated financial data. You should read this summary financial data together with the sections titled "Selected Consolidated Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" as well as our audited consolidated financial statements included elsewhere in this prospectus.

Except as otherwise noted, the summary consolidated statements of operations and consolidated balance sheet data presented below as of and for the years ended December 31, 2013 and 2014 are derived from our audited consolidated financial statements included elsewhere in this prospectus. Our results of operations for any prior period are not necessarily indicative of results of operations that should be expected in any future periods.

	Year Ended December 31,	
	2013	2014
	(in thousands, except share and per share information)	
Consolidated Statements of Operations Data:		
Revenue:		
Collaboration and license revenue	$ —	$ 13,038[3]
Grant revenue	828	351
Total revenue	828	13,389
Operating expenses:		
Research and development[1]	10,687	23,513
General and administrative[1]	4,677	8,994
Total operating expenses	15,364	32,507
Loss from operations	(14,536)	(19,118)
Interest expense	(1,371)	(2,395)[4]
Gain on extinguishment of convertible promissory notes	—	3,553[5]
Other (expense) income, net	(147)	946
Net loss and comprehensive loss	$ (16,054)	$ (17,014)
Net loss per common share, basic and diluted[2]	$ (55.80)	$ (53.06)
Shares used in computing net loss per common share, basic and diluted[2]	287,711	320,686
Pro forma net loss per common share, basic and diluted[2]		$ (0.70)
Shares used in computing pro forma net loss per common share, basic and diluted[2]		28,042,827

(1) Includes stock-based compensation as follows:

	Year Ended December 31,	
	2013	2014
	(in thousands)	
Research and development	$ 194	$ 202
General and administrative	215	368
Total stock-based compensation	$ 409	$ 570

(2) See Note 16 to our audited consolidated financial statements included elsewhere in this prospectus for an explanation of the calculations of our basic and diluted net loss per common share, pro forma net loss per common share, and the weighted-average number of shares used in the computation of the per share amounts.

(3) Represents the revenue recognized in connection with our collaboration agreements entered into with Janssen Biotech, Inc. in May and November 2014. See Note 7 to our audited consolidated financial statements included elsewhere in this prospectus.

(4) Includes amortization of debt discount associated with convertible promissory notes due to the issuance of warrants and beneficial conversion feature associated with such convertible promissory notes. See Note 5 to our audited consolidated financial statements included elsewhere in this prospectus.

(5) Upon the conversion of convertible promissory notes issued to related parties into Series C convertible preferred stock in May 2014, a gain on extinguishment was recorded because the amount allocated to reacquire the convertible promissory notes was less than the carrying value of the notes. See Note 5 to our audited consolidated financial statements included elsewhere in this prospectus.

	At December 31, 2014		
	Actual	Pro Forma(1)	Pro Forma As Adjusted(2)(3)
		(in thousands)	
Consolidated Balance Sheet Data:			
Cash and cash equivalents	$119,456	$ 119,456	$ 211,206
Working capital	81,006	81,006	172,756
Total assets	126,462	126,462	218,212
Convertible preferred stock warrant liability	100	—	—
Common stock warrant liability	889	889	889
Convertible preferred stock	139,963	—	—
Accumulated deficit	(61,643)	(61,643)	(61,643)
Total stockholders' (deficit) equity	(61,297)	78,766	170,516

(1) The pro forma column has been derived from the unaudited pro forma information from our audited consolidated financial statements included elsewhere in this prospectus, and reflects the automatic conversion of all outstanding shares of our convertible preferred stock and convertible preferred stock warrants into common stock and common stock warrants, respectively, immediately prior to the closing of this offering.

(2) The pro forma as adjusted column further reflects the receipt of the estimated net proceeds from the sale of 6,666,666 shares of common stock in this offering and the concurrent private placement at an assumed initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the underwriting discount and estimated expenses payable by us.

(3) A $1.00 increase (decrease) in the assumed initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) each of cash and cash equivalents, working capital, total assets and total stockholders' equity by $4.7 million, assuming that the number of shares offered as set forth on the cover page of this prospectus remains the same, and after deducting the underwriting discount and estimated expenses payable by us. Each increase (decrease) of 1,000,000 shares in the number of shares of common stock offered by us would increase (decrease) each of cash and cash equivalents, working capital, total assets and total stockholders' equity by approximately $14.0 million, assuming an initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the underwriting discount and estimated expenses payable by us. The pro forma as adjusted information discussed above is illustrative only and will be adjusted based on the actual public offering price and other terms of this offering determined at pricing.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the following risks and all of the other information contained in this prospectus, including our financial statements and related notes, before investing in our common stock. While we believe that the risks and uncertainties described below are the material risks currently facing us, additional risks that we do not yet know of or that we currently think are immaterial may also arise and materially affect our business. If any of the following risks materialize, our business, financial condition and results of operations could be materially and adversely affected. In that case, the trading price of our common stock could decline, and you may lose some or all of your investment.

Risks Related to Our Business

We have incurred net losses in every year since our inception and anticipate that we will continue to incur substantial and increasing net losses in the foreseeable future.

We are a clinical-stage biopharmaceutical company with a limited operating history. Investment in biopharmaceutical product development is highly speculative because it entails substantial upfront capital expenditures and significant risk that any potential product candidate will fail to demonstrate adequate effect or an acceptable safety profile, gain regulatory approval and become commercially viable. We have financed our operations primarily through the sale of equity securities and convertible debt securities. Since our inception, most of our resources have been dedicated to the preclinical and clinical development of our product candidates. The size of our future net losses will depend, in part, on our future expenses and our ability to generate revenue, if any. We have no products approved for commercial sale and have not generated any revenue from product sales to date, and we continue to incur significant research and development and other expenses related to our ongoing operations. As a result, we are not profitable and have incurred losses in each period since our inception. For the years ended December 31, 2013 and 2014, we reported a net loss of $16.1 million and $17.0 million, respectively. At December 31, 2014, we had an accumulated deficit of $61.6 million. We expect to continue to incur significant losses for the foreseeable future, and we expect these losses to increase as we continue our research and development of, and seek regulatory approvals for, our product candidates.

Even if we succeed in commercializing one or more of our product candidates, we will continue to incur substantial research and development and other expenditures to develop and market additional product candidates. We may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business. The size of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenue. Our prior losses and expected future losses have had and will continue to have an adverse effect on our stockholders' equity and working capital.

We will require substantial additional financing to achieve our goals, and a failure to obtain this necessary capital when needed could force us to delay, limit, reduce or terminate our product development or commercialization efforts.

Our operations have consumed substantial amounts of cash since inception. At December 31, 2014, our cash and cash equivalents were $119.5 million. We expect to continue to spend substantial amounts to continue the clinical development of our product candidates. If we are able to gain regulatory approval for any of our product candidates, we will require significant additional amounts of cash in order to launch and commercialize any such product candidates. In addition, other unanticipated costs may arise. Because the design and outcome of our planned and anticipated clinical trials is highly uncertain, we cannot reasonably estimate the actual amounts necessary to successfully complete the development and commercialization of our product candidates.

Our future capital requirements depend on many factors, including:

- the scope, progress, results and costs of researching and developing our product candidates, and conducting preclinical studies and clinical trials;
- the timing of, and the costs involved in, obtaining regulatory approvals for our product candidates if clinical trials are successful;
- the cost of commercialization activities for our product candidates, if any of our product candidates is approved for sale, including marketing, sales and distribution costs;
- the cost of manufacturing our product candidates for clinical trials in preparation for regulatory approval and in preparation for commercialization;
- our ability to establish and maintain strategic licensing or other arrangements and the financial terms of such agreements;
- the costs involved in preparing, filing, prosecuting, maintaining, expanding, defending and enforcing patent claims, including litigation costs and the outcome of such litigation;
- the timing, receipt and amount of sales of, or royalties on, our future products, if any; and
- the emergence of competing cancer therapies and other adverse market developments.

We do not have any committed external source of funds or other support for our development efforts other than our license agreements with Janssen, which may be terminated by Janssen upon delivery of notice, and our collaboration and license agreement with Novartis, which may be terminated by Novartis at any time after March 19, 2018 upon 180 days' notice. Until we can generate sufficient product and royalty revenue to finance our cash requirements, which we may never do, we expect to finance our future cash needs through a combination of public or private equity offerings, debt financings, collaborations, strategic alliances, licensing arrangements and other marketing or distribution arrangements. Additional financing may not be available to us when we need it or it may not be available on favorable terms.

If we raise additional capital through marketing and distribution arrangements or other collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish certain valuable rights to our product candidates, technologies, future revenue streams or research programs or grant licenses on terms that may not be favorable to us. If we raise additional capital through public or private equity offerings, the ownership interest of our existing stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect our stockholders' rights. If we raise additional capital through debt financing, we may be subject to covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we are unable to obtain adequate financing when needed, we may have to delay, reduce the scope of or suspend one or more of our clinical trials or research and development programs or our commercialization efforts.

Risks Related to the Development and Commercialization of Our Current and Future Product Candidates

Our technology platforms and product candidates are based on novel technologies, and the development and regulatory approval pathway for such product candidates is unproven and may never lead to marketable products.

We are developing our pipeline of immuno-oncology product candidates via two technology platforms: Live, Attenuated, Double-Deleted, or LADD, *Listeria monocytogenes* and cyclic dinucleotides, or CDNs. Immuno-oncology encompasses a class of therapies that leverage the patient's immune system to slow the

growth and spread of, or eliminate, tumor cells. Any products we develop may not effectively modulate the immune response to slow the spread of or eliminate cancer cells. The scientific evidence to support the feasibility of developing product candidates based on impacting the anti-tumor immune response is preliminary and limited. Advancing these novel immuno-oncology therapies creates significant challenges for us, including, among others:

- obtaining approval from regulatory authorities to conduct clinical trials with our product candidates;
- successful enrollment and completion of preclinical studies and clinical trials with favorable results;
- obtaining approvals from regulatory authorities to manufacture and market our product candidates;
- obtaining and maintaining patent and trade secret protection and regulatory exclusivity for our product candidates;
- making arrangements with third-party manufacturers for, or establishing, commercial manufacturing capabilities;
- manufacturing our product candidates at an acceptable cost;
- launching commercial sales of our product candidates, if and when approved, whether alone or in collaboration with Janssen, Novartis or other partners;
- acceptance of our product candidates, if and when approved, by patients, the medical community and third-party payors;
- effectively competing with other cancer therapies;
- obtaining and maintaining coverage and adequate reimbursement by third-party payors, including government payors, for our product candidates;
- protecting rights in our intellectual property portfolio;
- maintaining a continued acceptable safety profile of our product candidates, if approved, following approval; and
- maintaining and growing an organization of scientists and business people who can develop and commercialize our products and technology.

If we do not achieve one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully develop and commercialize our product candidates, which could materially harm our business, financial condition and results of operations.

We may not be successful in our efforts to use and expand our technology platforms to build a pipeline of product candidates.

A key element of our strategy is to use and expand our technology platforms to build a pipeline of product candidates, combine our product candidates with existing and novel therapies, and progress these product candidates and combinations through clinical development for the treatment of various diseases. Although our research and development efforts to date have resulted in a pipeline of product candidates directed at various cancers, we may not be able to develop product candidates that are safe and effective. Even if we are successful in continuing to build our pipeline, the potential product candidates that we identify may not be suitable for

clinical development, including as a result of being shown to have harmful side effects or other characteristics that indicate that they are unlikely to be products that will receive marketing approval and achieve market acceptance. If we do not continue to successfully develop and begin to commercialize product candidates, we will face difficulty in obtaining product revenues in future periods.

Our business is highly dependent on the success of our lead product candidate, CRS-207, and GVAX Pancreas. CRS-207, GVAX Pancreas and our other product candidates from our LADD and CDN technology platforms will require significant additional clinical testing before we can seek regulatory approval and potentially launch commercial sales.

We do not have any products that have gained regulatory approval. Our business and future success depend on our ability to obtain regulatory approval of and then successfully commercialize our lead product candidate, CRS-207, and GVAX Pancreas. CRS-207, GVAX Pancreas and our other product candidates are in the early stages of development. We are currently conducting our Phase 2b ECLIPSE clinical trial of CRS-207 in combination with GVAX Pancreas to treat late-stage metastatic pancreatic cancer patients who have received at least one prior line of therapy. Our ability to develop, obtain regulatory approval for, and successfully commercialize CRS-207 and GVAX Pancreas effectively will depend on several factors, including the following:

- successful completion of our Phase 2b ECLIPSE clinical trial or other clinical trials, which will depend substantially upon the satisfactory performance of third-party contractors;
- successful achievement of the objectives of the our Phase 2b ECLIPSE clinical trial, including the demonstration of a survival benefit and a favorable risk-benefit outcome;
- receipt of marketing approvals for CRS-207 and GVAX Pancreas from the U.S. Food and Drug Administration, or FDA, and similar regulatory authorities outside the United States;
- establishing commercial manufacturing and supply arrangements;
- establishing a commercial infrastructure;
- acceptance of the product by patients, the medical community and third-party payors;
- establishing market share while competing with other therapies;
- successfully executing our pricing and reimbursement strategy;
- a continued acceptable safety and adverse event profile of the product following regulatory approval; and
- qualifying for, identifying, registering, maintaining, enforcing and defending intellectual property rights and claims covering the product.

All of our product candidates, including CRS-207 and GVAX Pancreas, will require additional clinical and non-clinical development, regulatory review and approval in multiple jurisdictions, substantial investment, access to sufficient commercial manufacturing capacity and significant marketing efforts before we can generate any revenue from product sales. We are not permitted to market or promote any of our product candidates before we receive regulatory approval from the FDA or comparable foreign regulatory authorities, and we may never receive such regulatory approval for any of our product candidates. If we are unable to develop or receive marketing approval for CRS-207 or GVAX Pancreas in a timely manner or at all, we could experience significant delays or an inability to commercialize CRS-207 and GVAX Pancreas, which would materially and adversely affect our business, financial condition and results of operations.

Clinical development involves a lengthy and expensive process with uncertain outcomes, and results of earlier studies and trials may not be predictive of future clinical trial results. Our clinical trials may fail to demonstrate adequately the safety and efficacy of one or more of our product candidates, which would prevent or delay regulatory approval and commercialization.

Before obtaining regulatory approvals for the commercial sale of our product candidates, including CRS-207, we must demonstrate through lengthy, complex and expensive preclinical testing and clinical trials that our product candidates are both safe and effective for use in each target indication. Clinical testing is expensive and can take many years to complete, and its outcome is inherently uncertain. Failure can occur at any time during the clinical trial process. The results of preclinical studies and early clinical trials of our product candidates may not be predictive of the results of later-stage clinical trials. For example, the positive results generated to date in preclinical studies and in our Phase 2a metastatic pancreatic cancer study for CRS-207 do not ensure that future studies will demonstrate similar results. There is typically an extremely high rate of attrition from the failure of product candidates proceeding through clinical trials. Product candidates in later stages of clinical trials may fail to show the desired safety and efficacy profile despite having progressed through preclinical studies and initial clinical trials. A number of companies in the biopharmaceutical industry have suffered significant setbacks in advanced clinical trials due to lack of efficacy or adverse safety profiles, notwithstanding promising results in earlier trials. We cannot be certain that we will not face similar setbacks. Most product candidates that commence clinical trials are never approved as commercial products.

We may experience delays in our ongoing clinical trials and we do not know whether planned clinical trials will begin on time, need to be redesigned, enroll patients on time or be completed on schedule, if at all. Clinical trials can be delayed for a variety of reasons, including delays related to:

- obtaining regulatory approval to commence a trial;
- reaching agreement on acceptable terms with prospective contract research organizations, or CROs, and clinical trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different CROs and trial sites;
- obtaining institutional review board, or IRB, approval at each site;
- recruiting suitable patients to participate in a trial;
- having patients complete a trial or return for post-treatment follow-up;
- clinical sites deviating from trial protocol or dropping out of a trial;
- adding new clinical trial sites; or
- manufacturing sufficient quantities of product candidate for use in clinical trials.

We could encounter delays if a clinical trial is suspended or terminated by us, by the IRBs of the institutions in which such trials are being conducted, by the Data Safety Monitoring Board, or DSMB, for such trial or by the FDA or other regulatory authorities. Such authorities may impose such a suspension or termination due to a number of factors, including failure to conduct the clinical trial in accordance with regulatory requirements or our clinical protocols, inspection of the clinical trial operations or trial site by the FDA or other regulatory authorities resulting in the imposition of a clinical hold, unforeseen safety issues or adverse side effects, failure to demonstrate a benefit from using a drug, changes in governmental regulations or administrative actions or lack of adequate funding to continue the clinical trial.

Furthermore, we rely on CROs and clinical trial sites to ensure the proper and timely conduct of our clinical trials and while we have agreements governing their committed activities, we have limited influence over

their actual performance. If we experience delays in the completion of, or termination of, any clinical trial of our product candidates, the commercial prospects of our product candidates will be harmed, and our ability to generate product revenues from any of these product candidates will be delayed. In addition, any delays in completing our clinical trials will increase our costs, slow down our product candidate development and approval process and jeopardize our ability to commence product sales and generate revenues. Any of these occurrences may harm our business, financial condition and prospects significantly. In addition, principal investigators for our clinical trials may serve as scientific advisors or consultants to us from time to time and receive cash compensation in connection with such services. We also give grants to investigators' institutions from time to time. If certain of these relationships exceed specific financial thresholds, they must be reported to the FDA If these relationships and any related compensation paid results in perceived or actual conflicts of interest, or the FDA concludes that the financial relationship may have affected interpretation of the study, the integrity of the data generated at the applicable clinical trial site may be questioned and the utility of the clinical trial itself may be jeopardized, which could result in the delay in approval, or rejection, of our marketing applications by the FDA. Many of the factors that cause, or lead to, a delay in the commencement or completion of clinical trials may also ultimately lead to the denial of regulatory approval of our product candidates.

In addition, even if the trials are successfully completed, we cannot guarantee that the FDA or foreign regulatory authorities will interpret the results as we do, and we may need to conduct additional trials before we submit applications seeking regulatory approval of our product candidates.

To the extent that the results of the trials are not satisfactory to the FDA or foreign regulatory authorities for support of a marketing application, approval of our product candidates may be significantly delayed, or we may be required to expend significant additional resources, which may not be available to us, to conduct additional trials in support of potential approval of our product candidates.

Our product candidates may cause undesirable side effects or have other properties that could halt their clinical development, prevent their regulatory approval, limit their commercial potential, if approved, or result in significant negative consequences.

Undesirable side effects caused by our product candidates could cause us or regulatory authorities to interrupt, delay or halt clinical trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or comparable foreign regulatory authorities. Results of our clinical trials could reveal a high and unacceptable severity and prevalence of side effects or unexpected characteristics.

To date, patients treated with CRS-207 have experienced drug-related side effects including Grade 3 adverse events, or AEs, which are considered moderate, and Grade 4 AEs which are considered severe. In our Phase 2a clinical trial of CRS-207, the most frequent drug-related Grade 3 or 4 AE was lymphopenia (an abnormally low level of white blood cells), with three patients experiencing Grade 3 lymphopenia and two patients experiencing Grade 4 lymphopenia. Lymphopenia is expected based on prior nonclinical studies and CRS-207's mechanism of action, and the AEs of lymphopenia were self-correcting or did not reveal an unexpected pattern of toxicity. We currently do not plan to alter our development plan for CRS-207 based on these observed AEs of lymphopenia. There were no other Grade 4 AEs, and there were no other Grade 3 AEs with frequencies higher than five percent in either arm. The most common Grade 3 AEs were transient lymphopenia, fevers, elevated liver enzymes and fatigue.

If unacceptable side effects arise in the development of our product candidates, we could suspend or terminate our clinical trials or the FDA or comparable foreign regulatory authorities could order us to cease clinical trials or deny approval of our product candidates for any or all targeted indications. Treatment-related side effects could also affect patient recruitment or the ability of enrolled patients to complete the trial or result in potential product liability claims. In addition, these side effects may not be appropriately recognized or managed by the treating medical staff. We expect to have to train medical personnel using our product candidates to understand the side effect profiles for our clinical trials and upon any commercialization of any of our product candidates. Inadequate training in recognizing or managing the potential side effects of our product candidates

could result in patient injury or death. Any of these occurrences may harm our business, financial condition and prospects significantly.

Additionally, if one or more of our product candidates receives marketing approval, and we or others later identify undesirable side effects caused by such products, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw approvals of such product;
- regulatory authorities may require additional warnings on the label;
- we may be required to create a medication guide outlining the risks of such side effects for distribution to patients;
- we could be sued and held liable for harm caused to patients; and
- our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of the particular product candidate, if approved, and could significantly harm our business, results of operations and prospects.

If we encounter difficulties enrolling patients in our clinical trials, our clinical development activities could be delayed or otherwise adversely affected.

The timely completion of clinical trials in accordance with their protocols depends, among other things, on our ability to enroll a sufficient number of patients who remain in the study until its conclusion. We may experience difficulties in patient enrollment in our clinical trials for a variety of reasons. The enrollment of patients depends on many factors, including:

- the patient eligibility criteria defined in the protocol;
- the size of the patient population required for analysis of the trial's primary endpoints;
- the proximity of patients to study sites;
- the design of the trial;
- our ability to recruit clinical trial investigators with the appropriate competencies and experience;
- clinicians' and patients' perceptions as to the potential advantages of the product candidate being studied in relation to other available therapies, including any new drugs that may be approved for the indications we are investigating;
- our ability to obtain and maintain patient consents; and
- the risk that patients enrolled in clinical trials will drop out of the trials before completion.

In addition, our clinical trials will compete with other clinical trials for product candidates that are in the same therapeutic areas as our product candidates, and this competition will reduce the number and types of patients available to us, because some patients who might have opted to enroll in our trials may instead opt to enroll in a trial being conducted by one of our competitors. Since the number of qualified clinical investigators is limited, we expect to conduct some of our clinical trials at the same clinical trial sites that some of our competitors use, which will reduce the number of patients who are available for our clinical trials in such clinical trial site. Moreover, because our product candidates represent a departure from more commonly used methods for cancer treatment, potential patients and their doctors may be inclined to use conventional therapies, such as chemotherapy and hematopoietic cell transplantation, rather than enroll patients in any future clinical trial.

Delays in patient enrollment may result in increased costs or may affect the timing or outcome of the planned clinical trials, which could prevent completion of these trials and adversely affect our ability to advance the development of our product candidates.

Clinical trials are expensive, time-consuming and difficult to design and implement.

Human clinical trials are expensive and difficult to design and implement, in part because they are subject to rigorous regulatory requirements. Because our product candidates are based on new technologies and engineered on a patient-by-patient basis, we expect that they will require extensive research and development and have substantial manufacturing and processing costs. In addition, costs to treat patients with relapsed/refractory cancer and to treat potential side effects that may result from our product candidates may be significant. Accordingly, our clinical trial costs are likely to be significantly higher than for more conventional therapeutic technologies or drug products.

The market opportunities for our product candidates may be limited to those patients who are ineligible for established therapies or for whom prior therapies have failed, and may be small.

Cancer therapies are sometimes characterized as first line, second line or third line, and the FDA often approves new therapies initially only for third line use. When cancer is detected early enough, first-line therapy, usually chemotherapy, hormone therapy, surgery, radiotherapy or a combination of these, is sometimes adequate to cure the cancer or prolong life without a cure. Second- and third-line therapies are administered to patients when prior therapy is not effective. We expect to initially seek approval of our product candidates as a therapy for patients who have received one or more prior treatments. Subsequently, for those products that prove to be sufficiently beneficial, if any, we would expect to seek approval potentially as a first-line therapy, but there is no guarantee that our product candidates, even if approved, would be approved for first-line therapy, and, prior to any such approvals, we may have to conduct additional clinical trials.

Our projections of both the number of people who have the cancers we are targeting, as well as the subset of people with these cancers who have received one or more prior treatments, and who have the potential to benefit from treatment with our product candidates, are based on our beliefs and estimates. These estimates have been derived from a variety of sources, including scientific literature, surveys of clinics, patient foundations, or market research, and may prove to be incorrect. Further, new studies may change the estimated incidence or prevalence of these cancers. The number of patients may turn out to be lower than expected. Additionally, the potentially addressable patient population for our product candidates may be limited or may not be amenable to treatment with our product candidates. Even if we obtain significant market share for our product candidates, because the potential target populations are small, we may never achieve profitability without obtaining regulatory approval for additional indications, including to be used as first or second line therapy.

We have obtained orphan drug designations from the FDA for CRS-207 and GVAX Pancreas for the treatment of pancreatic cancer and for CRS-207 for the treatment of mesothelioma, but we may be unable to maintain the benefits associated with orphan drug designation, including the potential for market exclusivity.

Under the Orphan Drug Act, the FDA may grant orphan drug designation to a drug or biologic intended to treat a rare disease or condition, which is defined as one occurring in a patient population of fewer than 200,000 in the United States, or a patient population greater than 200,000 in the United States where there is no reasonable expectation that the cost of developing the drug or biologic will be recovered from sales in the United States. In the United States, orphan drug designation entitles a party to financial incentives such as opportunities for grant funding towards clinical trial costs, tax advantages and user-fee waivers. In addition, if a product that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan drug exclusivity, which means that the FDA may not approve any other applications, including a full Biologics License Application, or BLA, to market the same biologic for the

same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity or where the manufacturer is unable to assure sufficient product quantity.

Even though we have received orphan drug designation for both CRS-207 and GVAX Pancreas for the treatment of pancreatic cancer and for CRS-207 for the treatment of mesothelioma, we may not be the first to obtain marketing approval of either product candidate for the orphan-designated indication due to the uncertainties associated with developing pharmaceutical products. In addition, exclusive marketing rights in the United States may be limited if we seek approval for an indication broader than the orphan-designated indication or may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition. Further, even if we obtain orphan drug exclusivity for a product, that exclusivity may not effectively protect the product from competition because different drugs with different active moieties can be approved for the same condition. Even after an orphan product is approved, the FDA can subsequently approve the same drug with the same active moiety for the same condition if the FDA concludes that the later drug is safer, more effective, or makes a major contribution to patient care. Orphan drug designation neither shortens the development time or regulatory review time of a drug nor gives the drug any advantage in the regulatory review or approval process. In addition, while we intend to seek orphan drug designation for other product candidates, we may never receive such designations.

We have obtained Breakthrough Therapy designation from the FDA for the combination of CRS-207 and GVAX Pancreas in pancreatic cancer, but we may be unable to maintain the benefits associated with this designation.

In 2012, the FDA established a new Breakthrough Therapy designation, which is intended to expedite the development and review of products that treat serious or life-threatening conditions where “preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development.” The designation of a product candidate as a Breakthrough Therapy provides potential benefits that include but are not limited to more frequent meetings with the FDA to discuss the development plan for the product candidate and ensure collection of appropriate data needed to support approval; more frequent written correspondence from FDA about such things as the design of the proposed clinical trials and use of biomarkers; intensive guidance on an efficient drug development program; organizational commitment involving senior managers; and eligibility for rolling review and priority review. Breakthrough Therapy designation does not change the standards for product approval. We have obtained Breakthrough Therapy designation for our CRS-207 and GVAX Pancreas combination. Despite the potential advantages of Breakthrough Therapy designation, we may fail to obtain regulatory approval of CRS-207 and GVAX Pancreas, and if we do obtain approval, we may fail to do so on an accelerated basis. In addition, while we intend to seek Breakthrough Therapy designation for other product candidates, we may never receive such designation.

If we fail to develop additional product candidates, our commercial opportunity will be limited.

We expect to initially develop our lead product candidate, CRS-207. However, one of our strategies is to pursue clinical development of additional product candidates. Developing, obtaining regulatory approval for and commercializing additional product candidates will require substantial additional funding beyond the net proceeds of this offering and are prone to the risks of failure inherent in medical product development. We cannot assure you that we will be able to successfully advance any of these additional product candidates through the development process.

Even if we obtain FDA approval to market additional product candidates for the treatment of cancer, we cannot assure you that any such product candidates will be successfully commercialized, widely accepted in the marketplace or more effective than other commercially available alternatives. If we are unable to successfully develop and commercialize additional product candidates, our commercial opportunity will be limited. Moreover, a failure in obtaining regulatory approval of additional product candidates may have a negative effect on the approval process of any other, or result in losing approval of any approved, product candidate.

We are subject to a multitude of manufacturing and supply chain risks, any of which could substantially increase our costs and limit the supply of our product candidates.

The process of manufacturing our product candidates is complex, highly regulated and subject to several risks, including:

- The manufacturing of drug products is susceptible to product loss due to contamination, equipment failure, improper installation or operation of equipment or vendor or operator error. Even minor deviations from normal manufacturing processes could result in reduced production yields, product defects and other supply disruptions. If foreign microbial, viral or other contaminations are discovered in our product candidates or in the manufacturing facilities in which our products are made, these manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination.

- The manufacturing facilities in which our product candidates are made could be adversely affected by equipment failures, labor shortages, natural disasters, power failures and numerous other factors.

- We and our contract manufacturers must comply with the FDA's cGMP regulations and guidelines. Any failure to follow cGMP or other regulatory requirements or any delay, interruption or other issues that arise in the manufacture, fill-finish, packaging, or storage of our products as a result of a failure of our facilities or the facilities or operations of third parties to comply with regulatory requirements or pass any regulatory authority inspection could significantly impair our ability to develop and commercialize our products, including leading to significant delays in the availability of products for our clinical studies or the termination or hold on a clinical study, or the delay or prevention of a filing or approval of marketing applications for our product candidates. Significant noncompliance could also result in the imposition of sanctions, including fines, injunctions, civil penalties, failure of regulatory authorities to grant marketing approvals for our product candidates, delays, suspension or withdrawal of approvals, license revocation, seizures or recalls of products, operating restrictions and criminal prosecutions, any of which could damage our reputation. If we are not able to maintain regulatory compliance, we may not be permitted to market our products and/or may be subject to product recalls, seizures, injunctions, or criminal prosecution.

- Our LADD product candidates and GVAX Pancreas are temperature sensitive and must be frozen during storage and transportation, which adds complexity and expense. We rely on third parties to provide controlled temperature storage and shipping. If any third-party provider fails to maintain proper temperature control or if a shipment is delayed in transit for a prolonged period of time, the product could become unsuitable for use.

Any adverse developments affecting manufacturing operations for our product candidates and/or damage that occurs during shipping may result in delays, inventory shortages, lot failures, withdrawals or recalls or other interruptions in the supply of our drug substance and drug product. We may also have to write off inventory, incur other charges and expenses for supply of drug product that fails to meet specifications, undertake costly remediation efforts, or seek more costly manufacturing alternatives. Inability to meet the demand for any of our product candidates, if approved, could damage our reputation and the reputation of our products among physicians, healthcare payors, patients or the medical community, which could adversely affect our ability to operate our business and our results of operations.

We currently have no marketing and sales organization and have no experience in marketing products. If we are unable to establish marketing and sales capabilities or enter into agreements with third parties to market and sell our product candidates, we may not be able to generate product revenue.

We currently have no sales, marketing or distribution capabilities and have no experience in marketing products. We intend to develop an in-house marketing organization and sales force, which will require significant

capital expenditures, management resources and time. We will have to compete with other pharmaceutical and biotechnology companies to recruit, hire, train and retain marketing and sales personnel.

If we are unable or decide not to establish internal sales, marketing and distribution capabilities, we will pursue collaborative arrangements regarding the sales and marketing of our products; however, we cannot assure you that we will be able to establish or maintain such collaborative arrangements, or if we are able to do so, that they will have effective sales forces. Any revenue we receive will depend upon the efforts of such third parties, which may not be successful. We may have little or no control over the marketing and sales efforts of such third parties and our revenue from product sales may be lower than if we had commercialized our product candidates ourselves. We also face competition in our search for third parties to assist us with the sales and marketing efforts of our product candidates.

We cannot assure you that we will be able to develop in-house sales and distribution capabilities or establish or maintain relationships with third-party collaborators to commercialize any product in the United States or elsewhere.

A variety of risks associated with marketing our product candidates internationally could materially adversely affect our business.

We plan to seek regulatory approval of our product candidates outside of the United States and, accordingly, we expect that we will be subject to additional risks related to operating in foreign countries if we obtain the necessary approvals, including:

- differing regulatory requirements in foreign countries;
- unexpected changes in tariffs, trade barriers, price and exchange controls and other regulatory requirements;
- economic weakness, including inflation, or political instability in particular foreign economies and markets;
- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- foreign taxes, including withholding of payroll taxes;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incident to doing business in another country;
- difficulties staffing and managing foreign operations;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- potential liability under the Foreign Corrupt Practices Act of 1977 or comparable foreign regulations;
- challenges enforcing our contractual and intellectual property rights, especially in those foreign countries that do not respect and protect intellectual property rights to the same extent as the United States;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad; and
- business interruptions resulting from geo-political actions, including war and terrorism.

These and other risks associated with our international operations may materially adversely affect our ability to attain or maintain profitable operations.

We face significant competition from other biotechnology and pharmaceutical companies, and our operating results will suffer if we fail to compete effectively.

The biopharmaceutical industry is characterized by intense competition and rapid innovation. Our competitors may be able to develop other compounds or drugs that are able to achieve similar or better results. Many major multinational pharmaceutical companies, established biotechnology companies, specialty pharmaceutical companies and universities and other research institutions continue to invest time and resources in developing novel approaches to immuno-oncology. Promising results have spurred significant competition from major pharmaceutical and biotechnology companies alike. Our competitors in the field of immuno-oncology and cancer vaccines include AdaptImmune LLC, Advaxis, Inc., AstraZeneca PLC, Bristol Myers-Squibb Company, Celgene Corporation, GlaxoSmithKline plc, Idera Pharmaceuticals, Inc., Immune Design Corp., Incyte Corporation, Merck & Co., Inc., Merrimack Pharmaceuticals, Inc., NewLink Genetic Corporation, Novartis AG, Pfizer Inc., Roche Holding Ltd, Sanofi SA, and Verastem, Inc., among others. Many of our competitors have substantially greater financial, technical and other resources than we do, such as larger research and development staff and experienced marketing and manufacturing organizations and well-established sales forces. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large, established companies. Mergers and acquisitions in the biotechnology and pharmaceutical industries may result in even more resources being concentrated in our competitors. Competition may increase further as a result of advances in the commercial applicability of technologies and greater availability of capital for investment in these industries. Our competitors, either alone or with collaborative partners, may succeed in developing, acquiring or licensing on an exclusive basis drug or biologic products that are more effective, safer, more easily commercialized or less costly than our product candidates or may develop proprietary technologies or secure patent protection that we may need for the development of our technologies and products. We believe the key competitive factors that will affect the development and commercial success of our product candidates are efficacy, safety, tolerability, reliability, convenience of use, price and reimbursement.

Even if we obtain regulatory approval of our product candidates, the availability and price of our competitors' products could limit the demand and the price we are able to charge for our product candidates. We may not be able to implement our business plan if the acceptance of our product candidates is inhibited by price competition or the reluctance of physicians to switch from existing methods of treatment to our product candidates, or if physicians switch to other new drug or biologic products or choose to reserve our product candidates for use in limited circumstances. For additional information regarding our competition, see "Business—Competition."

We are highly dependent on our key personnel, and if we are not successful in attracting and retaining highly qualified personnel, we may not be able to successfully implement our business strategy.

Our ability to compete in the highly competitive biotechnology and pharmaceutical industries depends upon our ability to attract and retain highly qualified managerial, scientific and medical personnel. We are highly dependent on our management, scientific and medical personnel, including our President and Chief Executive Officer, our Chief Scientific Officer and our Chief Operating Officer. The loss of the services of any of our executive officers, other key employees, and other scientific and medical advisors, and our inability to find suitable replacements could result in delays in product development and harm our business.

We conduct our operations at our facility in Northern California. This region is headquarters to many other biopharmaceutical companies and many academic and research institutions. Competition for skilled personnel in our market is intense and may limit our ability to hire and retain highly qualified personnel on acceptable terms or at all.

To induce valuable employees to remain at our company, in addition to salary and cash incentives, we have provided stock options that vest over time. The value to employees of stock options that vest over time may be significantly affected by movements in our stock price that are beyond our control, and may at any time be insufficient to counteract more lucrative offers from other companies. Despite our efforts to retain valuable employees, members of our management, scientific and development teams may terminate their employment with us on short notice. Although we have employment agreements with our key employees, these employment agreements provide for at-will employment, which means that any of our employees could leave our employment at any time, with or without notice. We do not maintain "key man" insurance policies on the lives of these individuals or the lives of any of our other employees. Our success also depends on our ability to continue to attract, retain and motivate highly skilled junior, mid-level and senior managers as well as junior, mid-level and senior scientific and medical personnel.

We will need to grow the size of our organization, and we may experience difficulties in managing this growth.

At March 31, 2015, we had 53 full-time employees, including 41 employees engaged in research and development. As our development and commercialization plans and strategies develop, and as we transition into operating as a public company, we expect to need additional managerial, operational, sales, marketing, financial and other personnel. Future growth would impose significant added responsibilities on members of management, including:

- identifying, recruiting, integrating, maintaining and motivating additional employees;
- managing our internal development efforts effectively, including the clinical and FDA review process for our product candidates, while complying with our contractual obligations to contractors and other third parties; and
- improving our operational, financial and management controls, reporting systems and procedures.

Our future financial performance and our ability to commercialize our product candidates will depend, in part, on our ability to effectively manage any future growth, and our management may also have to divert a disproportionate amount of its attention away from day-to-day activities in order to devote a substantial amount of time to managing these growth activities.

We currently rely, and for the foreseeable future will continue to rely, in substantial part on certain independent organizations, advisors and consultants to provide certain services, including substantially all aspects of regulatory approval, clinical management, and manufacturing. We cannot assure you that the services of independent organizations, advisors and consultants will continue to be available to us on a timely basis when needed, or that we can find qualified replacements. In addition, if we are unable to effectively manage our outsourced activities or if the quality or accuracy of the services provided by consultants is compromised for any reason, our clinical trials may be extended, delayed or terminated, and we may not be able to obtain regulatory approval of our product candidates or otherwise advance our business. We cannot assure you that we will be able to manage our existing consultants or find other competent outside contractors and consultants on economically reasonable terms, or at all.

If we are not able to effectively expand our organization by hiring new employees and expanding our groups of consultants and contractors, we may not be able to successfully implement the tasks necessary to further develop and commercialize our product candidates and, accordingly, may not achieve our research, development and commercialization goals.

Our internal computer systems, or those used by our CROs or other contractors or consultants, may fail or suffer security breaches.

Despite the implementation of security measures, our internal computer systems and those of our future CROs and other contractors and consultants are vulnerable to damage from computer viruses and unauthorized

access. While we have not to our knowledge experienced any such material system failure or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our development programs and our business operations. For example, the loss of clinical trial data from completed or future clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. Likewise, we rely on third parties for the manufacture of our product candidates and to conduct clinical trials, and similar events relating to their computer systems could also have a material adverse effect on our business. To the extent that any disruption or security breach were to result in a loss of, or damage to, our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the further development and commercialization of our product candidates could be delayed.

Business disruptions could seriously harm our future revenue and financial condition and increase our costs and expenses.

Our operations, and those of our CROs and other contractors and consultants, could be subject to earthquakes, power shortages, telecommunications failures, water shortages, floods, hurricanes, typhoons, fires, extreme weather conditions, medical epidemics and other natural or man-made disasters or business interruptions, for which we are predominantly self-insured. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses. We rely on third-party manufacturers to produce and process our product candidates on a patient by patient basis. Our ability to obtain clinical supplies of our product candidates could be disrupted if the operations of these suppliers are affected by a man-made or natural disaster or other business interruption. Our corporate headquarters is in Northern California near major earthquake faults and fire zones. The ultimate impact on us, our significant suppliers and our general infrastructure of being located near major earthquake faults and fire zones and being consolidated in certain geographical areas is unknown, but our operations and financial condition could suffer in the event of a major earthquake, fire or other natural disaster.

Our employees, independent contractors, consultants, commercial partners and vendors may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements.

We are exposed to the risk that our employees, independent contractors, consultants, commercial partners and vendors may engage in fraudulent or illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct or disclosure of unauthorized activities to us that violates: (1) the laws of the FDA and other similar foreign regulatory bodies, including those laws requiring the reporting of true, complete and accurate information to such regulators; (2) manufacturing standards; (3) healthcare fraud and abuse laws in the United States and similar foreign fraudulent misconduct laws; or (4) laws that require the true, complete and accurate reporting of financial information or data. If we obtain FDA approval of any of our product candidates and begin commercializing those products in the United States, our potential exposure under such laws will increase significantly, and our costs associated with compliance with such laws are also likely to increase. These laws may impact, among other things, our current activities with principal investigators and research patients, as well as proposed and future sales, marketing and education programs. In particular, the promotion, sales and marketing of healthcare items and services, as well as certain business arrangements in the healthcare industry, are subject to extensive laws designed to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws and regulations may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, structuring and commissions, certain customer incentive programs and other business arrangements generally. Activities subject to these laws also involve the improper use of information obtained in the course of patient recruitment for clinical trials.

Effective upon the completion of this offering, we intend to adopt a code of business conduct and ethics, but it is not always possible to identify and deter misconduct by our employees and other third parties, and the precautions we take to detect and prevent these activities may not be effective in controlling unknown or

unmanaged risks or losses or in protecting us from governmental investigations or other actions or lawsuits stemming from a failure to be in compliance with such laws or regulations. If any such actions are instituted against us and we are not successful in defending ourselves or asserting our rights, those actions could result in the imposition of significant fines or other sanctions, including the imposition of civil, criminal and administrative penalties, damages, monetary fines, possible exclusion from participation in Medicare, Medicaid and other federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings and curtailment of operations, any of which could adversely affect our ability to operate our business and our results of operations. Whether or not we are successful in defending against such actions or investigations, we could incur substantial costs, including legal fees, and divert the attention of management in defending ourselves against any of these claims or investigations.

Even if we obtain regulatory approval of our product candidates, the products may not gain market acceptance among physicians, patients, hospitals, cancer treatment centers and others in the medical community.

The use of LADD or CDN product candidates as potential cancer treatments, even if approved, may not become broadly accepted by physicians, patients, hospitals, cancer treatment centers and others in the medical community. For example, certain of the product candidates that we are developing target a cell surface marker that may be present on non-cancerous cells as well as cancer cells. It is possible that our product candidates may kill these non-cancerous cells, which may result in unacceptable side effects, including death. Additional factors will influence whether our product candidates are accepted in the market, including:

- the clinical indications for which our product candidates are approved;
- physicians, hospitals, cancer treatment centers and patients considering our product candidates as a safe and effective treatment;
- the potential and perceived advantages of our product candidates over alternative treatments;
- the prevalence and severity of any side effects;
- product labeling or product insert requirements of the FDA or other regulatory authorities;
- limitations or warnings contained in the labeling approved by the FDA;
- the timing of market introduction of our product candidates as well as competitive products;
- the cost of treatment in relation to alternative treatments;
- the availability of adequate coverage, reimbursement and pricing by third-party payors and government authorities;
- the willingness of patients to pay out-of-pocket in the absence of coverage by third-party payors and government authorities;
- relative convenience and ease of administration, including as compared to alternative treatments and competitive therapies; and
- the effectiveness of our sales and marketing efforts.

In addition, we are utilizing replication competent vectors, and adverse publicity due to the ethical and social controversies surrounding the therapeutic use of such technologies, and reported side effects from any

clinical trials using these technologies or the failure of such trials to demonstrate that these therapies are safe and effective may limit market acceptance our product candidates. If our product candidates are approved but fail to achieve market acceptance among physicians, patients, hospitals, cancer treatment centers or others in the medical community, we will not be able to generate significant revenue.

Even if our products achieve market acceptance, we may not be able to maintain that market acceptance over time if new products or technologies are introduced that are more favorably received than our products, are more cost effective or render our products obsolete.

If product liability lawsuits are brought against us, we may incur substantial liabilities and may be required to limit commercialization of our product candidates.

We face an inherent risk of product liability as a result of the clinical testing of our product candidates and will face an even greater risk if we commercialize any products. For example, we may be sued if our product candidates cause or are perceived to cause injury or are found to be otherwise unsuitable during clinical testing, manufacturing, marketing or sale. Any such product liability claims may include allegations of defects in manufacturing, defects in design, a failure to warn of dangers inherent in the product, negligence, strict liability or a breach of warranties. Claims could also be asserted under state consumer protection acts. If we cannot successfully defend ourselves against product liability claims, we may incur substantial liabilities or be required to limit commercialization of our product candidates. Even successful defense would require significant financial and management resources. Regardless of the merits or eventual outcome, liability claims may result in:

- decreased demand for our product candidates;
- injury to our reputation;
- withdrawal of clinical trial participants;
- initiation of investigations by regulators;
- costs to defend the related litigation;
- a diversion of management’s time and our resources;
- substantial monetary awards to trial participants or patients;
- product recalls, withdrawals or labeling, marketing or promotional restrictions;
- loss of revenue;
- exhaustion of any available insurance and our capital resources;
- the inability to commercialize any product candidate; and
- a decline in our share price.

Our inability to obtain sufficient product liability insurance at an acceptable cost to protect against potential product liability claims could prevent or inhibit the commercialization of products we develop, alone or with corporate collaborators.

We currently hold $5.0 million in product liability insurance in the aggregate, which we believe is customary for similarly situated companies and adequate to provide us with insurance coverage for foreseeable risks, but which may not be adequate to cover all liabilities that we may incur. Insurance coverage is increasingly

expensive. We may not be able to maintain insurance at a reasonable cost or in an amount adequate to satisfy any liability that may arise, if at all. Our insurance policy contains various exclusions, and we may be subject to a product liability claim for which we have no coverage. We may have to pay any amounts awarded by a court or negotiated in a settlement that exceed our coverage limitations or that are not covered by our insurance, and we may not have, or be able to obtain, sufficient capital to pay such amounts. Even if our agreements with any future corporate collaborators entitle us to indemnification against losses, such indemnification may not be available or adequate should any claim arise.

Risks Related to Our Reliance on Third Parties

We have entered into licensing agreements with third parties for certain product candidates and as a result have placed restrictions on our development of certain product candidates for particular indications. We may elect to enter into additional licensing or collaboration agreements to partner our product candidates in territories we currently retain. Our dependence on such relationships may adversely affect our business.

Because we have limited resources, we may seek to enter into collaboration agreements with other pharmaceutical or biotechnology companies. Any failure by our partners to perform their obligations or any decision by our partners to terminate these agreements could negatively impact our ability to successfully develop, obtain regulatory approvals for and commercialize our product candidates. In the event we grant exclusive rights to such partners, we would be precluded from potential commercialization of our product candidates within the territories in which we have a partner. For example, we have entered into exclusive research and license agreements with Janssen for the development and commercialization of ADU-741, GVAX for prostate cancer and ADU-214. Under these agreements, we have granted Janssen exclusive rights to develop and commercialize LADD product candidates for prostate and lung cancers. In addition, we have granted Janssen exclusive rights to develop and commercialize LADD product candidates with certain antigens and antigen combinations implicated in lung and other cancers for all fields of use. We have also entered into a collaboration and license agreement with Novartis for the development and commercialization of CDN product candidates in oncology. Under this agreement, we have granted Novartis a co-exclusive license to develop such products worldwide and an exclusive license to commercialize such products outside of the United States. In addition, any termination of our collaboration agreements will terminate the funding we may receive under the relevant collaboration agreement and may impair our ability to fund further development efforts and our progress in our development programs.

Our commercialization strategy for our product candidates may depend on our ability to enter into agreements with collaborators to obtain assistance and funding for the development and potential commercialization of our product candidates in the territories in which we seek to partner. Despite our efforts, we may be unable to secure additional collaborative licensing or other arrangements that are necessary for us to further develop and commercialize our product candidates. Supporting diligence activities conducted by potential collaborators and negotiating the financial and other terms of a collaboration agreement are long and complex processes with uncertain results. Even if we are successful in entering into one or more collaboration agreements, collaborations may involve greater uncertainty for us, as we have less control over certain aspects of our collaborative programs than we do over our proprietary development and commercialization programs. For example, under our collaboration and license agreement with Novartis, we are responsible for a share of the worldwide joint development costs, which may be significant. If we elect to reduce our share of development funding as provided for under the agreement, our share in profits would decrease or convert to a royalty. We may determine that continuing a collaboration under the terms provided is not in our best interest, and we may terminate the collaboration. Our potential future collaborators could delay or terminate their agreements, and as a result our product candidates may never be successfully commercialized.

Further, our potential future collaborators may develop alternative products or pursue alternative technologies either on their own or in collaboration with others, including our competitors, and the priorities or

focus of our collaborators may shift such that our product candidates receive less attention or resources than we would like, or they may be terminated altogether. We may also enter into agreements with collaborators to share in the burden of conducting clinical trials, manufacturing and marketing our product candidates. Any such actions by our potential future collaborators may adversely affect our business prospects and ability to earn revenues. In addition, we could have disputes with our potential future collaborators, such as the interpretation of terms in our agreements. Any such disagreements could lead to delays in the development or commercialization of our product candidates or could result in time-consuming and expensive litigation or arbitration, which may not be resolved in our favor.

We rely and will rely on third parties to conduct our clinical trials. If these third parties do not successfully carry out their contractual duties or meet expected deadlines, we may not be able to obtain regulatory approval of or commercialize our product candidates.

We depend and plan to continue to depend upon independent investigators, other third parties and collaborators, such as universities, medical institutions, CROs and strategic partners, to conduct our preclinical and clinical trials under agreements with us. We expect to have to negotiate budgets and contracts with CROs and study sites, which may result in delays to our development timelines and increased costs. We rely and plan to continue relying heavily on these third parties over the course of our clinical trials, and we control only certain aspects of their activities. Nevertheless, we are responsible for ensuring that each of our studies is conducted in accordance with the applicable protocol, legal, regulatory and scientific standards, and our reliance on third parties does not relieve us of our regulatory responsibilities. We and these third parties are required to comply with good clinical practices, or GCPs, which are regulations and guidelines enforced by the FDA and comparable foreign regulatory authorities for product candidates in clinical development. Regulatory authorities enforce these GCPs through periodic inspections of trial sponsors, principal investigators and trial sites. If we or any of these third parties fail to comply with applicable GCP regulations, the clinical data generated in our clinical trials may be deemed unreliable and the FDA or comparable foreign regulatory authorities may require us to perform additional clinical trials before approving our marketing applications. We cannot assure you that, upon inspection, such regulatory authorities will determine that any of our clinical trials comply with the GCP regulations. In addition, our clinical trials must be conducted with biologic product produced under current good manufacturing practices, or cGMPs, regulations and will require a large number of test patients. Our failure or any failure by these third parties to comply with these regulations or to recruit a sufficient number of patients may require us to repeat clinical trials, which would delay the regulatory approval process. Moreover, our business may be implicated if any of these third parties violates federal or state fraud and abuse or false claims laws and regulations or healthcare privacy and security laws.

Any third parties conducting our clinical trials are not our employees and, except for remedies available to us under our agreements with such third parties, we cannot control whether or not they devote sufficient time and resources to our ongoing preclinical, clinical and nonclinical programs. These third parties may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting clinical studies or other drug development activities, which could affect their performance on our behalf. If these third parties do not successfully carry out their contractual duties or obligations or meet expected deadlines, if they need to be replaced or if the quality or accuracy of the clinical data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements or for other reasons, our clinical trials may be extended, delayed or terminated and we may not be able to complete development of, obtain regulatory approval of or successfully commercialize our product candidates. As a result, our financial results and the commercial prospects for our product candidates would be harmed, our costs could increase and our ability to generate revenue could be delayed.

Switching or adding third parties to conduct our clinical trials involves substantial cost and requires extensive management time and focus. In addition, there is a natural transition period when a new third party commences work. As a result, delays occur, which can materially impact our ability to meet our desired clinical development timelines. Though we carefully manage our relationships with third parties conducting our clinical

trials, we cannot assure you that we will not encounter similar challenges or delays in the future or that these delays or challenges will not have a material adverse impact on our business, financial condition and prospects.

We rely and expect to continue to rely on third parties to manufacture our clinical product supplies, and we intend to rely on third parties to produce and process our product candidates, if approved, and our commercialization of any of our product candidates could be stopped, delayed or made less profitable if those third parties fail to obtain approval of government regulators, fail to provide us with sufficient quantities of drug product or fail to do so at acceptable quality levels or prices.

We do not currently have nor do we plan to acquire the infrastructure or capability internally to manufacture our clinical supplies for use in the conduct of our clinical trials, and we lack the resources and the capability to manufacture any of our product candidates on a clinical or commercial scale. We currently rely on outside vendors to manufacture our clinical supplies of our product candidates and plan to continue relying on third parties to manufacture our product candidates on a commercial scale, if approved.

The facilities used by our contract manufacturers to manufacture our product candidates must be approved by the FDA pursuant to inspections that will be conducted after we submit our marketing applications to the FDA. We do not control the manufacturing process of, and are completely dependent on, our contract manufacturing partners for compliance with the regulatory requirements, known as cGMPs, for manufacture of our product candidates. If our contract manufacturers cannot successfully manufacture material that conforms to our specifications and the strict regulatory requirements of the FDA or others, they will not be able to secure and/or maintain regulatory approval for their manufacturing facilities. In addition, we have no control over the ability of our contract manufacturers to maintain adequate quality control, quality assurance and qualified personnel. If the FDA or a comparable foreign regulatory authority does not approve these facilities for the manufacture of our product candidates or if it withdraws any such approval in the future, we may need to find alternative manufacturing facilities, which would significantly impact our ability to develop, obtain regulatory approval for or market our product candidates, if approved.

We do not yet have sufficient information to reliably estimate the cost of the commercial manufacturing of our product candidates, and the actual cost to manufacture our product candidates could materially and adversely affect the commercial viability of our product candidates. As a result, we may never be able to develop a commercially viable product.

In addition, our reliance on third-party manufacturers exposes us to the following additional risks:

- We may be unable to identify manufacturers on acceptable terms or at all.
- Our third-party manufacturers might be unable to timely formulate and manufacture our product or produce the quantity and quality required to meet our clinical and commercial needs, if any.
- Contract manufacturers may not be able to execute our manufacturing procedures appropriately.
- Our future contract manufacturers may not perform as agreed or may not remain in the contract manufacturing business for the time required to supply our clinical trials or to successfully produce, store and distribute our products.
- Manufacturers are subject to ongoing periodic unannounced inspection by the FDA and corresponding state agencies to ensure strict compliance with cGMP and other government regulations and corresponding foreign standards. We do not have control over third-party manufacturers’ compliance with these regulations and standards.
- We may not own, or may have to share, the intellectual property rights to any improvements made by our third-party manufacturers in the manufacturing process for our products.

- Our third-party manufacturers could breach or terminate their agreement with us.

Each of these risks could delay our clinical trials, the approval, if any of our product candidates by the FDA or the commercialization of our product candidates or result in higher costs or deprive us of potential product revenue. In addition, we rely on third parties to perform release testing on our product candidates prior to delivery to patients. If these tests are not appropriately conducted and test data are not reliable, patients could be put at risk of serious harm and could result in product liability suits.

The manufacture of medical products is complex and requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. Manufacturers of biologic products often encounter difficulties in production, particularly in scaling up and validating initial production and absence of contamination. These problems include difficulties with production costs and yields, quality control, including stability of the product, quality assurance testing, operator error, shortages of qualified personnel, as well as compliance with strictly enforced federal, state and foreign regulations. Furthermore, if contaminants are discovered in our supply of our product candidates or in the manufacturing facilities, such manufacturing facilities may need to be closed for an extended period of time to investigate and remedy the contamination. We cannot assure you that any stability or other issues relating to the manufacture of our product candidates will not occur in the future. Additionally, our manufacturers may experience manufacturing difficulties due to resource constraints or as a result of labor disputes or unstable political environments. If our manufacturers were to encounter any of these difficulties, or otherwise fail to comply with their contractual obligations, our ability to provide our product candidates to patients in clinical trials would be jeopardized. Any delay or interruption in the supply of clinical trial supplies could delay the completion of clinical trials, increase the costs associated with maintaining clinical trial programs and, depending upon the period of delay, require us to commence new clinical trials at additional expense or terminate clinical trials completely.

We may form or seek strategic alliances or enter into additional licensing arrangements in the future, and we may not realize the benefits of such alliances or licensing arrangements.

We may form or seek strategic alliances, create joint ventures or collaborations or enter into additional licensing arrangements with third parties that we believe will complement or augment our development and commercialization efforts with respect to our product candidates and any future product candidates that we may develop. Any of these relationships may require us to incur non-recurring and other charges, increase our near and long-term expenditures, issue securities that dilute our existing stockholders or disrupt our management and business. In addition, we face significant competition in seeking appropriate strategic partners and the negotiation process is time-consuming and complex. Moreover, we may not be successful in our efforts to establish a strategic partnership or other alternative arrangements for our product candidates because they may be deemed to be at too early of a stage of development for collaborative effort and third parties may not view our product candidates as having the requisite potential to demonstrate safety and efficacy. If we license products or businesses, we may not be able to realize the benefit of such transactions if we are unable to successfully integrate them with our existing operations and company culture. We cannot be certain that, following a strategic transaction or license, we will achieve the revenue or specific net income that justifies such transaction. Any delays in entering into new strategic partnership agreements related to our product candidates could delay the development and commercialization of our product candidates in certain geographies for certain indications, which would harm our business prospects, financial condition and results of operations.

If our third-party manufacturers use hazardous and biological materials in a manner that causes injury or violates applicable law, we may be liable for damages.

Our research and development activities involve the controlled use of potentially hazardous substances, including chemical and biological materials, by our third-party manufacturers. Our manufacturers are subject to federal, state and local laws and regulations in the United States governing the use, manufacture, storage,

handling and disposal of medical and hazardous materials. Although we believe that our manufacturers' procedures for using, handling, storing and disposing of these materials comply with legally prescribed standards, we cannot completely eliminate the risk of contamination or injury resulting from medical or hazardous materials. As a result of any such contamination or injury, we may incur liability or local, city, state or federal authorities may curtail the use of these materials and interrupt our business operations. In the event of an accident, we could be held liable for damages or penalized with fines, and the liability could exceed our resources. We do not have any insurance for liabilities arising from medical or hazardous materials. Compliance with applicable environmental laws and regulations is expensive, and current or future environmental regulations may impair our research, development and production efforts, which could harm our business, prospects, financial condition or results of operations.

Risks Related to Government Regulation

The FDA regulatory approval process is lengthy and time-consuming, and we may experience significant delays in the clinical development and regulatory approval of our product candidates.

The time required to obtain approval by the FDA and comparable foreign authorities is unpredictable but typically takes many years following the commencement of clinical trials and depends upon numerous factors, including the substantial discretion of the regulatory authorities. In addition, approval policies, regulations or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions. We have not previously submitted a BLA or NDA to the FDA, or similar marketing applications filings to comparable foreign authorities. A BLA or NDA must include extensive preclinical and clinical data and supporting information to establish the product candidate's safety, purity and potency, or safety and effectiveness for each desired indication. The BLA or NDA must also include significant information regarding the chemistry, manufacturing and controls for the product. We expect the novel nature of our product candidates to create further challenges in obtaining regulatory approval. For example, the FDA has limited experience with commercial development of immunotherapies for cancer. We also intend to obtain regulatory approval of future product candidates regardless of cancer type or origin, which the FDA may have difficulty accepting if our clinical trials only involved cancers of certain origins. Accordingly, the regulatory approval pathway for our product candidates may be uncertain, complex, expensive and lengthy, and approval may not be obtained.

Our product candidates could fail to receive regulatory approval for many reasons, including the following:

- the FDA or comparable foreign regulatory authorities may disagree with the design or implementation of our clinical trials;
- we may be unable to demonstrate to the satisfaction of the FDA or comparable foreign regulatory authorities that a product candidate is safe and effective for its proposed indication;
- the results of clinical trials may not meet the level of statistical significance required by the FDA or comparable foreign regulatory authorities for approval;
- we may be unable to demonstrate that a product candidate's clinical and other benefits outweigh its safety risks;
- the FDA or comparable foreign regulatory authorities may disagree with our interpretation of data from preclinical studies or clinical trials;
- the data collected from clinical trials of our product candidates may not be sufficient to support the submission of a BLA or other submission or to obtain regulatory approval in the United States or elsewhere;

- the FDA or comparable foreign regulatory authorities may fail to approve the manufacturing processes or facilities of third-party manufacturers with which we contract for clinical and commercial supplies; or

- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may significantly change in a manner rendering our clinical data insufficient for approval.

This lengthy approval process as well as the unpredictability of future clinical trial results may result in our failing to obtain regulatory approval to market our product candidates, which would significantly harm our business, results of operations and prospects.

In addition, even if we were to obtain approval, regulatory authorities may approve any of our product candidates for fewer or more limited indications than we request, may not approve the price we intend to charge for our products, may grant approval contingent on the performance of costly post-marketing clinical trials or may approve a product candidate with a label that does not include the labeling claims necessary or desirable for the successful commercialization of that product candidate. Any of the foregoing scenarios could materially harm the commercial prospects for our product candidates.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not mean that we will be successful in obtaining regulatory approval of our product candidates in other jurisdictions.

Obtaining and maintaining regulatory approval of our product candidates in one jurisdiction does not guarantee that we will be able to obtain or maintain regulatory approval in any other jurisdiction, while a failure or delay in obtaining regulatory approval in one jurisdiction may have a negative effect on the regulatory approval process in others. For example, even if the FDA grants marketing approval of a product candidate, comparable regulatory authorities in foreign jurisdictions must also approve the manufacturing, marketing and promotion of the product candidate in those countries. Approval procedures vary among jurisdictions and can involve requirements and administrative review periods different from, and greater than, those in the United States, including additional preclinical studies or clinical trials as clinical studies conducted in one jurisdiction may not be accepted by regulatory authorities in other jurisdictions. In many jurisdictions outside the United States, a product candidate must be approved for reimbursement before it can be approved for sale in that jurisdiction. In some cases, the price that we intend to charge for our products is also subject to approval.

We may also submit marketing applications in other countries. Regulatory authorities in jurisdictions outside of the United States have requirements for approval of product candidates with which we must comply prior to marketing in those jurisdictions. Obtaining foreign regulatory approvals and compliance with foreign regulatory requirements could result in significant delays, difficulties and costs for us and could delay or prevent the introduction of our products in certain countries. If we fail to comply with the regulatory requirements in international markets and/or receive applicable marketing approvals, our target market will be reduced and our ability to realize the full market potential of our product candidates will be harmed.

Even if we receive regulatory approval of our product candidates, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense and we may be subject to penalties if we fail to comply with regulatory requirements or experience unanticipated problems with our product candidates.

Any regulatory approvals that we receive for our product candidates may be subject to limitations on the approved indicated uses for which the product may be marketed or the conditions of approval, or contain requirements for potentially costly post-market testing and surveillance to monitor the safety and efficacy of the product candidate. The FDA may also require a risk evaluation and mitigation strategy, or REMS, as a condition of approval of our product candidates, which could include requirements for a medication guide, physician communication plans or additional elements to ensure safe use, such as restricted distribution methods, patient

registries and other risk minimization tools. In addition, if the FDA or a comparable foreign regulatory authority approves our product candidates, the manufacturing processes, labeling, packaging, distribution, adverse event reporting, storage, advertising, promotion, import, export and recordkeeping for our product candidates will be subject to extensive and ongoing regulatory requirements. These requirements include submissions of safety and other post-marketing information and reports, registration, as well as continued compliance with cGMPs and GCPs for any clinical trials that we conduct post-approval. Later discovery of previously unknown problems with our product candidates, including adverse events of unanticipated severity or frequency, or with our third-party manufacturers or manufacturing processes, or failure to comply with regulatory requirements, may result in, among other things:

- restrictions on the marketing or manufacturing of our product candidates, withdrawal of the product from the market, or voluntary or mandatory product recalls;
- fines, warning letters or holds on clinical trials;
- refusal by the FDA to approve pending applications or supplements to approved applications filed by us or suspension or revocation of license approvals;
- product seizure or detention, or refusal to permit the import or export of our product candidates; and
- injunctions or the imposition of civil or criminal penalties.

The FDA's and other regulatory authorities' policies may change and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of our product candidates. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or abroad. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and we may not achieve or sustain profitability.

In addition, if we were able to obtain accelerated approval of our pancreatic cancer combination of CRS-207 and GVAX Pancreas, the FDA would require us to conduct a confirmatory study to verify the predicted clinical benefit and additional safety studies. The results from the confirmatory study may not support the clinical benefit, which would result in the approval being withdrawn.

Coverage and reimbursement may be limited or unavailable in certain market segments for our product candidates, which could make it difficult for us to sell our product candidates profitably.

Successful sales of our product candidates, if approved, depend, in part, on the availability of adequate coverage and reimbursement from third-party payors. In addition, because our product candidates represent new approaches to the treatment of cancer, we cannot accurately estimate the potential revenue from our product candidates.

Patients who are provided medical treatment for their conditions generally rely on third-party payors to reimburse all or part of the costs associated with their treatment. Adequate coverage and reimbursement from governmental healthcare programs, such as Medicare and Medicaid, and commercial payors is critical to new product acceptance.

Government authorities and third-party payors, such as private health insurers and health maintenance organizations, decide which drugs and treatments they will cover and the amount of reimbursement. Reimbursement by a third-party payor may depend upon a number of factors, including, but not limited to, the third-party payor's determination that use of a product is:

- a covered benefit under its health plan;

- safe, effective and medically necessary;
- appropriate for the specific patient;
- cost-effective; and
- neither experimental nor investigational.

Obtaining coverage and reimbursement approval of a product from a government or other third-party payor is a time-consuming and costly process that could require us to provide to the payor supporting scientific, clinical and cost-effectiveness data for the use of our products. Even if we obtain coverage for a given product, the resulting reimbursement payment rates might not be adequate for us to achieve or sustain profitability or may require co-payments that patients find unacceptably high. Further, we plan to develop our product candidates for use in combination with other products, which may make them cost prohibitive or less likely to be covered by third-party payors. Patients are unlikely to use our product candidates unless coverage is provided and reimbursement is adequate to cover a significant portion of the cost of our product candidates.

In the United States, no uniform policy of coverage and reimbursement for products exists among third-party payors. Therefore, coverage and reimbursement for products can differ significantly from payor to payor. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific, clinical and cost-effectiveness data and support for the use of our product candidates to each payor separately, with no assurance that coverage and adequate reimbursement will be obtained. We intend to seek approval to market our product candidates in both the United States and in selected foreign jurisdictions. If we obtain approval in one or more foreign jurisdictions for our product candidates, we will be subject to rules and regulations in those jurisdictions. In some foreign countries, particularly those in the EU, the pricing of biologics is subject to governmental control. In these countries, pricing negotiations with governmental authorities can take considerable time after obtaining marketing approval of a product candidate.

Recently enacted and future legislation may increase the difficulty and cost for us to obtain marketing approval of and commercialize our product candidates and affect the prices we may obtain.

Third-party payors, whether domestic or foreign, or governmental or commercial, are developing increasingly sophisticated methods of controlling healthcare costs. In both the United States and certain foreign jurisdictions, there have been a number of legislative and regulatory changes to the health care system that could impact our ability to sell our products profitably. In particular, in March 2010, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act, collectively, the Affordable Care Act, was enacted. The Affordable Care Act and its implementing regulations, among other things, subjected biologic products to potential competition by lower-cost biosimilars, addressed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for certain drugs and biologics, including our product candidates, that are inhaled, infused, instilled, implanted or injected, increased the minimum Medicaid rebates owed by manufacturers under the Medicaid Drug Rebate Program, extended the Medicaid Drug Rebate Program to utilization of prescriptions of individuals enrolled in Medicaid managed care organizations, subjected manufacturers to new annual fees and taxes for certain branded prescription drugs, provided incentives to programs that increase the federal government’s comparative effectiveness research and established a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer’s outpatient drugs to be covered under Medicare Part D.

Other legislative changes have been proposed and adopted in the United States since the Affordable Care Act was enacted. In August 2011, the Budget Control Act of 2011, among other things, created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending

a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions of Medicare payments to providers of 2% per fiscal year, which went into effect in April 2013, and will remain in effect through 2024 unless additional Congressional action is taken. In January 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, or the ATRA, which, among other things, further reduced Medicare payments to several providers, including hospitals and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years.

There have been, and likely will continue to be, legislative and regulatory proposals at the foreign, federal and state levels directed at broadening the availability of healthcare and containing or lowering the cost of healthcare. We cannot predict the initiatives that may be adopted in the future. The continuing efforts of the government, insurance companies, managed care organizations and other payors of healthcare services to contain or reduce costs of healthcare and/or impose price controls may adversely affect:

- the demand for our product candidates, if we obtain regulatory approval;
- our ability to set a price that we believe is fair for our products;
- our ability to generate revenue and achieve or maintain profitability;
- the level of taxes that we are required to pay; and
- the availability of capital.

Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors, which may adversely affect our future profitability.

Our current and future relationships with customers and third-party payors in the United States and elsewhere may be subject, directly or indirectly, to applicable anti-kickback, fraud and abuse, false claims, transparency, health information privacy and security and other healthcare laws and regulations, which could expose us to criminal sanctions, civil penalties, contractual damages, reputational harm, administrative burdens and diminished profits and future earnings.

Healthcare providers, physicians and third-party payors in the United States and elsewhere will play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our future arrangements with third-party payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations, including, without limitation, the federal Anti-Kickback Statute and the federal False Claims Act, which may constrain the business or financial arrangements and relationships through which we sell, market and distribute any drugs for which we obtain marketing approval. In addition, we may be subject to transparency laws and patient privacy regulation by the U.S. federal and state governments and by governments in foreign jurisdictions in which we conduct our business. The applicable federal, state and foreign healthcare laws and regulations that may affect our ability to operate include:

- the federal Anti-Kickback Statute, which prohibits, among other things, knowingly and willfully soliciting, receiving, offering or paying any remuneration (including any kickback, bribe, or rebate), directly or indirectly, overtly or covertly, in cash or in kind, to induce, or in return for, either the referral of an individual, or the purchase, lease, order or recommendation of any good, facility, item or service for which payment may be made, in whole or in part, under a federal healthcare program, such as the Medicare and Medicaid programs. A person or entity can be found guilty of violating the statute without actual knowledge of the statute or specific intent to violate it. In addition, the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal False Claims Act;

- federal civil and criminal false claims laws and civil monetary penalty laws, which prohibit, among other things, individuals or entities from knowingly presenting, or causing to be presented, claims for payment or approval from Medicare, Medicaid, or other third-party payors that are false or fraudulent or knowingly making a false statement to improperly avoid, decrease or conceal an obligation to pay money to the federal government;

- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which created federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or obtain, by means of false or fraudulent pretenses, representations, or promises, any of the money or property owned by, or under the custody or control of, any healthcare benefit program, regardless of the payor (e.g., public or private) and knowingly and willfully falsifying, concealing or covering up by any trick or device a material fact or making any materially false statements in connection with the delivery of, or payment for, healthcare benefits, items or services relating to healthcare matters. Similar to the federal Anti-Kickback Statute, a person or entity can be found guilty of violating these statutes without actual knowledge of the statutes or specific intent to violate them;

- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, or HITECH, and their respective implementing regulations, which impose requirements on certain covered healthcare providers, health plans and healthcare clearinghouses as well as their respective business associates that perform services for them that involve the use, or disclosure of, individually identifiable health information, relating to the privacy, security and transmission of individually identifiable health information without appropriate authorization;

- the federal Physician Payment Sunshine Act, created under the Affordable Care Act, and its implementing regulations, which require manufacturers of drugs, devices, biologicals and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to the United States Department of Health and Human Services, or HHS, information related to payments or other transfers of value made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, as well as ownership and investment interests held by physicians and their immediate family members and payments or other "transfers of value" made to such physician owners;

- federal consumer protection and unfair competition laws, which broadly regulate marketplace activities and activities that potentially harm consumers; and

- analogous state and foreign laws and regulations, such as state anti-kickback and false claims laws, which may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers; state and foreign laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government or otherwise restrict payments that may be made to healthcare providers; state and foreign laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures; and state and foreign laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Because of the breadth of these laws and the narrowness of the statutory exceptions and regulatory safe harbors available under such laws, it is possible that some of our business activities could be subject to challenge under one or more of such laws. The scope and enforcement of each of these laws is uncertain and subject to

rapid change in the current environment of healthcare reform, especially in light of the lack of applicable precedent and regulations. Federal and state enforcement bodies have recently increased their scrutiny of interactions between healthcare companies and healthcare providers, which has led to a number of investigations, prosecutions, convictions and settlements in the healthcare industry. Responding to investigations can be time-and resource-consuming and can divert management's attention from the business. Additionally, as a result of these investigations, healthcare providers and entities may have to agree to additional onerous compliance and reporting requirements as part of a consent decree or corporate integrity agreement. Any such investigation or settlement could increase our costs or otherwise have an adverse effect on our business.

If our operations are found to be in violation of any of the laws described above or any other government regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines, disgorgement, imprisonment, exclusion from participation in federal and state healthcare programs and the curtailment or restricting of our operations, any of which could harm our ability to operate our business and our financial results. In addition, the approval and commercialization of any of our product candidates outside the United States will also likely subject us to foreign equivalents of the healthcare laws mentioned above, among other foreign laws.

Risks Related to Our Intellectual Property

If we are unable to protect our intellectual property rights or if our intellectual property rights are inadequate for our technology and product candidates, our competitive position could be harmed.

Our commercial success will depend in part on our ability to obtain and maintain patent and other intellectual property protection in the United States and other countries with respect to our proprietary technology and products. We rely on trade secret, patent, copyright and trademark laws, and confidentiality, licensing and other agreements with employees and third parties, all of which offer only limited protection. We seek to protect our proprietary position by filing and prosecuting patent applications in the United States and abroad related to our novel technologies and products that are important to our business.

The patent positions of biotechnology and pharmaceutical companies generally are highly uncertain, involve complex legal and factual questions and have in recent years been the subject of much litigation. As a result, the issuance, scope, validity, enforceability and commercial value of our patents, including those patent rights licensed to us by third parties, are highly uncertain. The steps we or our licensors have taken to protect our proprietary rights may not be adequate to preclude misappropriation of our proprietary information or infringement of our intellectual property rights, both inside and outside of the United States Further, the examination process may require us or our licensors to narrow the claims for our pending patent applications, which may limit the scope of patent protection that may be obtained if these applications issue. The rights already granted under any of our currently issued patents or those licensed to us and those that may be granted under future issued patents may not provide us with the proprietary protection or competitive advantages we are seeking. If we or our licensors are unable to obtain and maintain patent protection for our technology and products, or if the scope of the patent protection obtained is not sufficient, our competitors could develop and commercialize technology and products similar or superior to ours, and our ability to successfully commercialize our technology and products may be adversely affected. It is also possible that we or our licensors will fail to identify patentable aspects of inventions made in the course of our development and commercialization activities before it is too late to obtain patent protection on them.

With respect to patent rights, we do not know whether any of the pending patent applications for any of our compounds or biologic products will result in the issuance of patents that effectively protect our technology or products, or if any of our issued patents or if any of our or our licensors' issued patents will effectively prevent others from commercializing competitive technologies and products. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing or in some cases not at all, until they are

issued as a patent. Therefore, we cannot be certain that we or our licensors were the first to make the inventions claimed in our owned or licensed patents or pending patent applications, or that we or our licensors were the first to file for patent protection of such inventions.

Our pending applications cannot be enforced against third parties practicing the technology claimed in such applications unless and until a patent issues from such applications. Because the issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, issued patents that we own or have licensed from third parties may be challenged in the courts or patent offices in the United States and abroad. Such challenges may result in the loss of patent protection, the narrowing of claims in such patents or the invalidity or unenforceability of such patents, which could limit our ability to stop others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection for our technology and products. Protecting against the unauthorized use of our or our licensor's patented technology, trademarks and other intellectual property rights is expensive, difficult and may in some cases not be possible. In some cases, it may be difficult or impossible to detect third-party infringement or misappropriation of our intellectual property rights, even in relation to issued patent claims, and proving any such infringement may be even more difficult. For example, two of our patents, U.S. Patent Nos. 7,842,289 and 7,935,804, related to our LADD technology platform were challenged in an *ex parte* reexamination proceeding, which is now concluded. No claims of U.S. Patent No. 7,842,289 were canceled or amended as a result of the e*x parte* reexamination. Of the original 84 claims of U.S. Patent No. 7,935,804, 12 were amended and 22 were canceled to overcome the objections raised in the e*x parte* reexamination, but we believe the remaining claims still cover our LADD technology platform.

Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain and could harm our business.

Our commercial success depends upon our ability to develop, manufacture, market and sell our product candidates, and to use our related proprietary technologies without infringing the intellectual property rights of third parties. We may become party to, or threatened with, future adversarial proceedings or litigation regarding intellectual property rights with respect to our product candidates, including interference or derivation proceedings before the U.S. Patent and Trademark Office, or USPTO. Third parties may assert infringement claims against us based on existing patents or patents that may be granted in the future. If we are found to infringe a third party's intellectual property rights, we could be required to obtain a license from such third party to continue commercializing our product candidates. However, we may not be able to obtain any required license on commercially reasonable terms or at all. Under certain circumstances, we could be forced, including by court order, to cease commercializing our product candidates. In addition, in any such proceeding or litigation, we could be found liable for monetary damages. A finding of infringement could prevent us from commercializing our product candidates or force us to cease some of our business operations, which could materially harm our business. Any claims by third parties that we have misappropriated their confidential information or trade secrets could have a similar negative impact on our business.

While our product candidates are in preclinical studies and clinical trials, we believe that their use in these preclinical studies and clinical trials falls within the scope of the exemptions provided by 35 U.S.C. Section 271(e) in the United States, which exempts from patent infringement liability activities reasonably related to the development and submission of information to the FDA. As our product candidates progress toward commercialization, the possibility of a patent infringement claim against us increases. We attempt to ensure that our product candidates and the methods we employ to manufacture them, as well as the methods for their use we intend to promote, do not infringe other parties' patents and other proprietary rights. We cannot assure you they do not, however, and competitors or other parties may assert that we infringe their proprietary rights in any event.

In addition, we are testing our product candidates administered with other product candidates or products that are covered by patents held by other companies or institutions. In the event that a labeling instruction is required in product packaging recommending that combination, we could be accused of, or held

liable for, infringement of the third-party patents covering the product candidate or product recommended for administration with our product candidates. In such a case, we could be required to obtain a license from the other company or institution to use the required or desired package labeling, which may not be available on commercially reasonable terms, or at all.

We are aware of certain U.S. and foreign patents owned by a certain third party with claims that are broadly directed to a *Listeria* vaccine strain that contains certain proteins, some of which expire as late as 2021. These patents could be construed to cover CRS-207. In addition, we are aware of certain U.S. and foreign patents owned by a certain third party with claims that are broadly directed methods of using *Listeria*-based vaccines to treat certain cancers, which expire in 2017. The patents expiring in 2017 may be construed to cover our LADD product candidate, CRS-207, as well as the product candidates licensed to Janssen, ADU-214 and ADU-741. Notwithstanding, we do not currently expect a product launch prior to 2017 and, therefore, the patents expiring in 2017 would not appear relevant to our commercialization plans unless our approval was accelerated or they somehow were extended. Generally, conducting clinical trials and other development activities in the United States is not considered an act of infringement. If and when products are approved by the FDA, that certain third party may then seek to enforce its patents by filing a patent infringement lawsuit against us or our licensee(s). In such lawsuit, we or our licensee(s) may incur substantial expenses defending our rights or our licensee(s) rights to commercialize such product candidates, and in connection with such lawsuit and under certain circumstances, it is possible that we or our licensee(s) could be required to cease or delay the commercialization of a product candidate and/or be required to pay monetary damages or other amounts, including royalties on the sales of such products. Moreover, such lawsuit may also consume substantial time and resources of our or our licensee(s) management team and board of directors. The threat or consequences of such a lawsuit may also result in royalty and other monetary obligations, which may adversely affect our results of operations and financial condition.

If we breach any of our license agreements, it could have a material adverse effect on our commercialization efforts for our product candidates.

Our commercial success depends on our ability, and the ability of our licensors and collaborators, to develop, manufacture, market and sell our product candidates and use our licensors' or collaborators' proprietary technologies without infringing the property rights of third parties. For example, we have entered into license agreements with the Johns Hopkins University and the Regents of the University of California related to our LADD product candidates, and license agreements with Karagen Pharmaceuticals, Inc. and the Regents of the University of California related to our CDN product candidates, and we expect to enter into additional licenses in the future. If we fail to comply with the obligations under these agreements, including payment and diligence terms, our licensors may have the right to terminate these agreements, in which event we may not be able to develop, manufacture, market or sell any product that is covered by these agreements or may face other penalties under the agreements. Such an occurrence could materially adversely affect the value of the product candidate being developed under any such agreement. Termination of these agreements or reduction or elimination of our rights under these agreements may result in our having to negotiate new or reinstated agreements, which may not be available to us on equally favorable terms, or at all, or cause us to lose our rights under these agreements, including our rights to intellectual property or technology important to our development programs.

We have granted Janssen certain rights to file, prosecute, maintain and enforce specific patents that relate to ADU-214, ADU-741 and GVAX Prostate. Our inability to control the filing, prosecution, maintenance and enforcement of such patents could materially harm our business.

As part of the agreements with Janssen related to ADU-214, ADU-741 and GVAX Prostate, we have granted Janssen the initial right and responsibility to file, prosecute, maintain and enforce any patents and patent applications that contain pending or issued claims that are specifically directed to the antigens contained in ADU-214, ADU-741 and GVAX Prostate. For example, if a third party is infringing one of the antigen-specific patents by marketing a product that is identical or similar to ADU-214 for the treatment of lung cancer (such as a

biosimilar of ADU-214), Janssen would have the initial right to enforce the antigen-specific patents against the third party. If we do not have the ability to control the enforcement of the antigen-specific patents against a third party that is marketing a product that is identical or similar to ADU-214, ADV-741 or GVAX Prostate, our business may be materially harmed.

We have granted Janssen the right to determine patent term extension strategy for specific patents that relate to ADU-214, ADU-741 and GVAX Prostate. Our inability to control the patent term extension strategy could materially harm our business.

As part of the license agreements with Janssen related to ADU-214, ADU-741 and GVAX Prostate, we have granted Janssen the right and responsibility to determine the strategy to apply for the extension of the term of any licensed patents that are specifically directed to the antigen contained in ADU-214 or the antigens contained in ADU-741. Janssen may decide not to apply for extension of any term of a licensed patent that may otherwise be eligible for extension, which could decrease the royalties received from Janssen for the sale of ADU-214, ADU-741 and/or GVAX Prostate. If we allow Janssen to also apply for extension of a licensed patent for ADU-214, ADU-714 and/or GVAX Prostate that may also be relevant to another product candidates that we may be developing and commercializing, we could be prevented from seeking extension of the same patent for our product. If we do not have the ability to control the strategy for patent term extension of any of our licensed patents, our business may be materially harmed.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting and defending patents on all of our product candidates throughout the world would be prohibitively expensive, and our or our licensors' intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws and practices of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we and our licensors may not be able to prevent third parties from practicing our and our licensors' inventions in all countries outside the United States, or from selling or importing products made using our and our licensors' inventions in and into the United States or other jurisdictions. Competitors may use our technologies in jurisdictions where we have not obtained patent protection to develop their own products, and may export otherwise infringing products to territories where we or our licensors have patent protection, but where enforcement is not as strong as that in the United States. These products may compete with our products in jurisdictions where we do not have any issued patents and our patent claims or other intellectual property rights may not be effective or sufficient to prevent them from so competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in certain foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property protection, particularly those relating to biopharmaceuticals, which could make it difficult for us to stop the infringement of our or our licensor's patents or marketing of competing products in violation of our proprietary rights generally in those countries. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial cost and divert our efforts and attention from other aspects of our business, could put our and our licensors' patents at risk of being invalidated or interpreted narrowly and our and our licensors' patent applications at risk of not issuing and could provoke third parties to assert claims against us or our licensors. We or our licensors may not prevail in any lawsuits that we or our licensors initiate and the damages or other remedies awarded, if any, may not be commercially meaningful.

The laws of certain foreign countries may not protect our rights to the same extent as the laws of the United States, and these foreign laws may also be subject to change. For example, methods of treatment and manufacturing processes may not be patentable in certain jurisdictions, and the requirements for patentability may differ in certain countries, particularly developing countries. Furthermore, generic and/or biosimilar product manufacturers or other competitors may challenge the scope, validity or enforceability of our or our licensors' patents, requiring us or our licensors to engage in complex, lengthy and costly litigation or other proceedings.

Generic or biosimilar product manufacturers may develop, seek approval for, and launch biosimilar versions or generic versions, respectively, of our products. The FDA has published four draft guidance documents on biosimilar product development. For the FDA to approve a biosimilar product as interchangeable with a reference product, the agency must find that the biosimilar product can be expected to produce the same clinical results as the reference product and, for products administered multiple times, the biosimilar and the reference biologic may be switched after one has been previously administered without increasing safety risks or risks of diminished efficacy relative to exclusive use of the reference biologic. However, complexities associated with the larger, and often more complex, structures of biological products, as well as the process by which such products are manufactured, pose significant hurdles to implementation, which are still being worked out by the FDA. To date, no biosimilar or interchangeable biologic has been licensed under the Biologics Price Competition and Innovation Act of 2009, or BPCIA, framework, although such approvals have occurred in Europe, and it is anticipated that the FDA will approve a biosimilar in the relatively near future. If any of our product candidates are approved by the FDA, the approval of a biologic product biosimilar to one of our products could have a material impact on our business. In particular, a biosimilar could be significantly less costly to bring to market and priced significantly lower than our products, if approved by the FDA. See "Business—Government Regulation and Product Approval—U.S. Patent Term Restoration and Marketing Exclusivity" for a more detailed description of the BPCIA.

Some jurisdictions may require us to grant licenses to third parties. Such compulsory licenses could be extended to include some of our product candidates, which may limit our potential revenue opportunities.

Many countries, including European Union countries, have compulsory licensing laws under which a patent owner may be compelled under certain circumstances to grant licenses to third parties. In those countries, we and our licensors may have limited remedies if patents are infringed or if we or our licensors are compelled to grant a license to a third party, which could materially diminish the value of those patents. This could limit our potential revenue opportunities. Accordingly, our and our licensors' efforts to enforce intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we own or license.

Patent terms may be inadequate to protect our competitive position on our products for an adequate amount of time, and our product candidates for which we intend to seek approval as biologic products may face competition sooner than anticipated.

Given the amount of time required for the development, testing and regulatory review of new product candidates, such as our product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. Currently, we own or license patent families that cover our LADD technology platform, which expire between 2022 and 2027, subject to any extensions, and we own or license patent families that cover *Listeria* strains engineered to express particular antigens, which expire between 2031 and 2033. We expect to seek extensions of patent terms in the United States and, if available, in other countries where we are prosecuting patents. In the United States, the Drug Price Competition and Patent Term Restoration Act of 1984 permits a patent term extension of up to five years beyond the normal expiration of the patent, which is limited to the approved indication (or any additional indications approved during the period of extension). However, the applicable authorities, including the FDA and the USPTO in the United States, and any equivalent regulatory authority in other countries, may not agree with our assessment of whether such extensions are available, and may refuse to grant extensions to our patents, or may grant more limited extensions than we request. If this occurs, our competitors may be able to take advantage of our investment in development and clinical trials by referencing our clinical and preclinical data and launch their product earlier than might otherwise be the case.

The BPCIA established legal authority for the FDA to review and approve biosimilar biologics, including the possible designation of a biosimilar as "interchangeable" based on its similarity to an existing brand product. Under the BPCIA, an application for a biosimilar product cannot be approved by the FDA until 12 years after the original branded product was approved under a BLA. The law is complex and is still being interpreted and

implemented by the FDA. As a result, its ultimate impact, implementation, and meaning are subject to uncertainty. While it is uncertain when such processes intended to implement BPCIA may be fully adopted by the FDA, any such processes could have a material adverse effect on the future commercial prospects for our biological products.

We anticipate being awarded market exclusivity for each of our biological product candidates that is subject to its own BLA for 12 years in the United States, 10 years in Europe and significant durations in other markets. However, the term of the patents that cover such product candidates may not extend beyond the applicable market exclusivity awarded by a particular country. For example, in the United States, if all of the patents that cover our particular biologic product expire before the 12-year market exclusivity expires, a third party could submit a marketing application for a biosimilar product four years after approval of our biologic product, and the FDA could immediately review the application and approve the biosimilar product for marketing 12 years after approval of our biologic. Alternatively, a third party could submit a BLA for a similar or identical product any time after approval of our biologic product, and the FDA could immediately review and approve the similar or identical product for marketing and the third party could begin marketing the similar or identical product upon expiry of all of the patents that cover our particular biologic product.

Additionally, there is a risk that this exclusivity could be shortened due to congressional action or otherwise, or that the FDA will not consider our product candidates to be reference products for competing products, potentially creating the opportunity for generic competition sooner than anticipated. The extent to which a biosimilar, once approved, will be substituted for any one of our reference products in a way that is similar to traditional generic substitution for non-biological products is not yet clear, and will depend on a number of marketplace and regulatory factors that are still developing.

Changes in patent law, including recent patent reform legislation, could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents.

As is the case with other pharmaceutical companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the pharmaceutical industry involve technological and legal complexity, and obtaining and enforcing pharmaceutical patents is costly, time-consuming, and inherently uncertain. Changes in either the patent laws or interpretation of the patent laws in the United States and other countries may diminish the value of our patents or narrow the scope of our patent protection. For example, the U.S. Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our and our licensors' ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on decisions by Congress, the federal courts, and the USPTO, the laws and regulations governing patents could change in unpredictable ways that would weaken our and our licensors' ability to obtain new patents or to enforce existing patents and patents we and our licensors may obtain in the future. Recent patent reform legislation could increase the uncertainties and costs surrounding the prosecution of our and our licensors' patent applications and the enforcement or defense of our or our licensors' issued patents.

In September 2011, the Leahy-Smith America Invents Act, or the Leahy-Smith Act, was signed into law. The Leahy-Smith Act includes a number of significant changes to U.S. patent law. These include provisions that affect the way patent applications will be prosecuted and may also affect patent litigation. In particular, under the Leahy-Smith Act, the United States transitioned in March 2013 to a "first to file" system in which the first inventor to file a patent application will be entitled to the patent. Third parties are allowed to submit prior art before the issuance of a patent by the USPTO and may become involved in opposition, derivation, reexamination, inter-partes review or interference proceedings challenging our patent rights or the patent rights of our licensors. An adverse determination in any such submission, proceeding or litigation could reduce the scope of, or invalidate, our or our licensors' patent rights, which could adversely affect our competitive position.

The USPTO is currently developing regulations and procedures to govern administration of the Leahy-Smith Act, and many of the substantive changes to patent law associated with the Leahy-Smith Act, and in

particular, the first to file provisions, did not become effective until March 16, 2013. Accordingly, it is not clear what, if any, impact the Leahy-Smith Act will have on the operation of our business. However, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our patent applications and the enforcement or defense of our issued patents and those licensed to us.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submissions, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for noncompliance with these requirements.

Periodic maintenance fees on any issued patent are due to be paid to the USPTO and foreign patent agencies in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Noncompliance events that could result in abandonment or lapse of a patent or patent application include, but are not limited to, failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. If we or our licensors fail to maintain the patents and patent applications covering our product candidates, our competitive position would be adversely affected.

We may become involved in lawsuits to protect or enforce our intellectual property, which could be expensive, time consuming and unsuccessful and have a material adverse effect on the success of our business.

Competitors may infringe our patents or misappropriate or otherwise violate our intellectual property rights. To counter infringement or unauthorized use, litigation may be necessary in the future to enforce or defend our intellectual property rights, to protect our trade secrets or to determine the validity and scope of our own intellectual property rights or the proprietary rights of others. Also, third parties may initiate legal proceedings against us or our licensors to challenge the validity or scope of intellectual property rights we own or control. These proceedings can be expensive and time consuming. Many of our current and potential competitors have the ability to dedicate substantially greater resources to defend their intellectual property rights than we can. Accordingly, despite our efforts, we may not be able to prevent third parties from infringing upon or misappropriating our intellectual property. Litigation could result in substantial costs and diversion of management resources, which could harm our business and financial results. In addition, in an infringement proceeding, a court may decide that a patent owned by or licensed to us is invalid or unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation proceeding could put one or more of our patents at risk of being invalidated, held unenforceable or interpreted narrowly. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments in any such proceedings. If securities analysts or investors perceive these results to be negative, it could have a material adverse effect on the price of shares of our common stock.

We may be subject to claims by third parties asserting that our licensors, employees or we have misappropriated their intellectual property, or claiming ownership of what we regard as our own intellectual property.

Many of our employees and our licensors' employees, including our senior management, were previously employed at universities or at other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Some of these employees, including each member of our senior management, executed proprietary rights, non-disclosure and non-competition agreements, or similar agreements, in connection with such previous employment. Although we try to ensure that our employees do not

use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or these employees have used or disclosed intellectual property, including trade secrets or other proprietary information, of any such third party. Litigation may be necessary to defend against such claims. If we fail in defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel or sustain damages. Such intellectual property rights could be awarded to a third party, and we could be required to obtain a license from such third party to commercialize our technology or products. Such a license may not be available on commercially reasonable terms or at all. Even if we are successful in defending against such claims, litigation could result in substantial costs and be a distraction to management.

Intellectual property rights do not necessarily address all potential threats to our competitive advantage.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations, and may not adequately protect our business, or permit us to maintain our competitive advantage. The following examples are illustrative:

- Others may be able to make compounds or biologics that are the same as or similar to our product candidates but that are not covered by the claims of the patents that we own or have exclusively licensed.
- We or our licensors or any strategic partners might not have been the first to make the inventions covered by the issued patents or pending patent applications that we own or have exclusively licensed.
- We or our licensors might not have been the first to file patent applications covering certain of our inventions.
- Others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing our intellectual property rights.
- It is possible that our pending patent applications will not lead to issued patents.
- Issued patents that we own or have exclusively licensed may not provide us with any competitive advantages, or may be held invalid or unenforceable as a result of legal challenges.
- Our competitors might conduct research and development activities in the United States and other countries that provide a safe harbor from patent infringement claims for certain research and development activities, as well as in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets.
- We may not develop additional proprietary technologies that are patentable.
- The patents of others may have an adverse effect on our business.

If we are unable to protect the confidentiality of our proprietary information and know-how, the value of our technology and products could be adversely affected.

In addition to patent protection, we also rely on other proprietary rights, including protection of trade secrets, know-how and confidential and proprietary information. To maintain the confidentiality of trade secrets and proprietary information, we will enter into confidentiality agreements with our employees, consultants and collaborators upon the commencement of their relationships with us. These agreements require that all confidential information developed by the individual or made known to the individual by us during the course of the individual’s relationship with us be kept confidential and not disclosed to third parties. Our agreements with employees also provide that any inventions conceived by the individual in the course of rendering services to us shall be our exclusive property. However, we may not obtain these agreements in all circumstances, and

individuals with whom we have these agreements may not comply with their terms. In the event of unauthorized use or disclosure of our trade secrets or proprietary information, these agreements, even if obtained, may not provide meaningful protection, particularly for our trade secrets or other confidential information. To the extent that our employees, consultants or contractors use technology or know-how owned by third parties in their work for us, disputes may arise between us and those third parties as to the rights in related inventions.

Adequate remedies may not exist in the event of unauthorized use or disclosure of our confidential information. The disclosure of our trade secrets would impair our competitive position and may materially harm our business, financial condition and results of operations.

Risks Related to our Financial Results

Our operating results may fluctuate significantly, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or our guidance.

Our quarterly and annual operating results may fluctuate significantly in the future, which makes it difficult for us to predict our future operating results. From time to time, in addition to existing agreements with Janssen and Novartis, we may enter into license or collaboration agreements with other companies that include development funding and significant upfront and milestone payments and/or royalties, which may become an important source of our revenue. Accordingly, our revenue may depend on development funding and the achievement of development and clinical milestones under current and any potential future license and collaboration agreements and sales of our products, if approved. These upfront and milestone payments may vary significantly from period to period and any such variance could cause a significant fluctuation in our operating results from one period to the next.

In addition, we measure compensation cost for stock-based awards made to employees at the grant date of the award, based on the fair value of the award as determined by our board of directors, and recognize the cost as an expense over the employee's requisite service period. As the variables that we use as a basis for valuing these awards change over time, including, after the closing of this offering, our underlying stock price and stock price volatility, the magnitude of the expense that we must recognize may vary significantly.

Furthermore, our operating results may fluctuate due to a variety of other factors, many of which are outside of our control and may be difficult to predict, including the following:

- the timing and cost of, and level of investment in, research and development activities relating to our current and any future product candidates, which will change from time to time;
- our ability to enroll patients in clinical trials and the timing of enrollment;
- the cost of manufacturing our current and any future product candidates, which may vary depending on FDA guidelines and requirements, the quantity of production and the terms of our agreements with manufacturers;
- expenditures that we will or may incur to acquire or develop additional product candidates and technologies;
- the timing and outcomes of clinical studies for our product candidates or competing product candidates;
- competition from existing and potential future drugs that compete with our product candidates, and changes in the competitive landscape of our industry, including consolidation among our competitors or partners;

- any delays in regulatory review or approval of CRS-207 or any of our other product candidates;
- the level of demand for our product candidates, if approved, which may fluctuate significantly and be difficult to predict;
- the risk/benefit profile, cost and reimbursement policies with respect to our products candidates, if approved, and existing and potential future drugs that compete with our product candidates;
- our ability to commercialize our product candidates, if approved, inside and outside of the United States, either independently or working with third parties;
- our ability to establish and maintain collaborations, licensing or other arrangements;
- our ability to adequately support future growth;
- potential unforeseen business disruptions that increase our costs or expenses;
- future accounting pronouncements or changes in our accounting policies; and
- the changing and volatile global economic environment.

The cumulative effect of these factors could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance. This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period. If our revenue or operating results fall below the expectations of analysts or investors or below any forecasts we may provide to the market, or if the forecasts we provide to the market are below the expectations of analysts or investors, the price of our common stock could decline substantially. Such a stock price decline could occur even when we have met any previously publicly stated revenue and/or earnings guidance we may provide.

We previously identified a material weakness in our internal control over financial reporting at December 31, 2012 and December 31, 2013, and we may identify additional material weaknesses in the future that may cause us to fail to meet our reporting obligations or result in material misstatements of our financial statements. If we fail to remediate any material weaknesses or if we fail to establish and maintain effective control over financial reporting, our ability to accurately and timely report our financial results could be adversely affected.

In connection with the contemporaneous audit of our consolidated financial statements for the years ended December 31, 2012 and 2013, we identified a control deficiency in the design and operation of our internal control over financial reporting that constituted a material weakness. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our financial statements will not be prevented or detected on a timely basis.

The material weakness identified in our internal control over financial reporting related to our lack of sufficient financial reporting and accounting personnel with the technical expertise to appropriately account for complex, non-routine transactions, primarily related to convertible debt and equity. The material weakness resulted in adjustments to our consolidated financial statements for the years ended December 31, 2012 and 2013. During 2013 and 2014, we took certain actions that remediated the material weakness, which included hiring additional personnel with public company financial reporting expertise to build our financial management and reporting infrastructure, and engaging a third party to provide additional advisory services with respect to technical accounting matters. We intend to further develop and document our accounting policies and financial reporting procedures. However, we cannot assure you that these measures will be sufficient to remediate or prevent future material weaknesses or significant deficiencies from occurring. We also cannot assure you that we have identified all of our existing material weaknesses.

Neither we nor our independent registered public accounting firm has performed an evaluation of our internal control over financial reporting during any period in accordance with the provisions of the Sarbanes-Oxley Act. In light of the control deficiencies and the resulting material weakness that were previously identified as a result of the limited procedures performed, we believe that it is possible that, had we and our independent registered public accounting firm performed an evaluation of our internal control over financial reporting in accordance with the provisions of the Sarbanes-Oxley Act, additional material weaknesses and significant control deficiencies may have been identified. However, for as long as we remain an "emerging growth company" as defined in the JOBS Act, we intend to take advantage of the exemption permitting us not to comply with the requirement that our independent registered public accounting firm provide an attestation on the effectiveness of our internal control over financial reporting.

If we identify future material weaknesses in our internal controls over financial reporting or fail to meet the demands that will be placed upon us as a public company, including the requirements of the Sarbanes-Oxley Act, we may be unable to accurately report our financial results, or report them within the timeframes required by law or stock exchange regulations. Failure to comply with Section 404 of the Sarbanes-Oxley Act could also potentially subject us to sanctions or investigations by the SEC or other regulatory authorities. We cannot assure that in the future, additional material weaknesses will not exist or otherwise be discovered, any of which could adversely affect our reputation, financial condition and results of operations.

Our ability to use our net operating loss carryforwards to offset future taxable income, and our ability to use our tax credit carryforwards, may be subject to certain limitations.

In general, a corporation that undergoes an "ownership change" under Section 382 of the Internal Revenue Code of 1986, as amended, or the Code, is subject to limitations on its ability to utilize its pre-change net operating loss carryforwards, or NOLs, to offset future taxable income and its ability to utilize tax credit carryforwards. As of December 31, 2014, we reported U.S. federal and state NOLs of approximately $51.2 million and $6.0 million, respectively. In general, an "ownership change" occurs if the aggregate stock ownership of one or more stockholders or groups of stockholders who owns at least 5% of a corporation's stock increases its ownership by more than 50 percentage points over its lowest ownership percentage within a specified testing period. We performed a Section 382 analysis and believe that we experienced multiple ownership changes under Section 382 of the Code. As a result of the ownership changes, we estimate that the utilization of $42.4 million and $5.0 million of federal and state NOLs, respectively, is subject to annual limitations under Section 382. Furthermore, future changes in our stock ownership, such as certain stock issuances (including in connection with this offering) and transfers between stockholders, some of which changes are outside of our control, could result in ownership changes under Section 382 of the Code. For these reasons, we may not be able to utilize a material portion of our NOLs and tax credit carryforwards, even if we attain profitability.

Risks Related to This Offering and Ownership of our Common Stock

The price of our stock may be volatile, and you could lose all or part of your investment.

The trading price of our common stock following this offering is likely to be highly volatile and could be subject to wide fluctuations in response to various factors, some of which are beyond our control, including limited trading volume. In addition to the factors discussed in this "Risk Factors" section and elsewhere in this prospectus, these factors include:

- the commencement, enrollment or results of the planned clinical trials of our product candidates or any future clinical trials we may conduct, or changes in the development status of our product candidates;

- any delay in our regulatory filings for our product candidates and any adverse development or perceived adverse development with respect to the applicable regulatory authority's review of such

filings, including without limitation the FDA's issuance of a "refusal to file" letter or a request for additional information;

- adverse results or delays in clinical trials;
- our decision to initiate a clinical trial, not to initiate a clinical trial or to terminate an existing clinical trial;
- adverse regulatory decisions, including failure to receive regulatory approval of our product candidates;
- changes in laws or regulations applicable to our products, including but not limited to clinical trial requirements for approvals;
- adverse developments concerning our manufacturers;
- our inability to obtain adequate product supply for any approved product or inability to do so at acceptable prices;
- our inability to establish collaborations if needed;
- our failure to commercialize our product candidates;
- additions or departures of key scientific or management personnel;
- unanticipated serious safety concerns related to the use of our product candidates;
- introduction of new products or services offered by us or our competitors;
- announcements of significant acquisitions, strategic partnerships, joint ventures or capital commitments by us or our competitors;
- our ability to effectively manage our growth;
- the size and growth of our initial cancer target markets;
- our ability to successfully treat additional types of cancers or at different stages;
- actual or anticipated variations in quarterly operating results;
- our cash position;
- our failure to meet the estimates and projections of the investment community or that we may otherwise provide to the public;
- publication of research reports about us or our industry, or immuno-oncology in particular, or positive or negative recommendations or withdrawal of research coverage by securities analysts;
- changes in the market valuations of similar companies;
- overall performance of the equity markets;
- sales of our common stock by us or our stockholders in the future;

- trading volume of our common stock;
- changes in accounting practices;
- ineffectiveness of our internal controls;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- significant lawsuits, including patent or stockholder litigation;
- general political and economic conditions; and
- other events or factors, many of which are beyond our control.

In addition, the stock market in general, and the NASDAQ Global Market and biopharmaceutical companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. Broad market and industry factors may negatively affect the market price of our common stock, regardless of our actual operating performance. If the market price of our common stock after this offering does not exceed the initial public offering price, you may not realize any return on your investment in us and may lose some or all of your investment. In the past, securities class action litigation has often been instituted against companies following periods of volatility in the market price of a company's securities. This type of litigation, if instituted, could result in substantial costs and a diversion of management's attention and resources, which would harm our business, operating results or financial condition.

We do not know whether an active, liquid and orderly trading market will develop for our common stock or what the market price of our common stock will be and as a result it may be difficult for you to sell your shares of our common stock.

Prior to this offering there has been no public market for shares of our common stock. Although we have applied to have our common stock listed on the NASDAQ Global Market, an active trading market for our shares may never develop or be sustained following this offering. You may not be able to sell your shares quickly or at the market price if trading in shares of our common stock is not active. The initial public offering price for our common stock will be determined through negotiations with the underwriters, and the negotiated price may not be indicative of the market price of the common stock after the offering. As a result of these and other factors, you may be unable to resell your shares of our common stock at or above the initial public offering price. Further, an inactive market may also impair our ability to raise capital by selling shares of our common stock and may impair our ability to enter into strategic partnerships or acquire companies or products by using our shares of common stock as consideration.

Unstable market and economic conditions may have serious adverse consequences on our business, financial condition and stock price.

As widely reported, global credit and financial markets have experienced extreme volatility and disruptions in the past several years, including severely diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates and uncertainty about economic stability. We cannot assure you that further deterioration in credit and financial markets and confidence in economic conditions will not occur. Our general business strategy may be adversely affected by any such economic downturn, volatile business environment or continued unpredictable and unstable market conditions. If the current equity and credit markets deteriorate, or do not improve, it may make any necessary debt or equity financing more difficult, more costly, and more dilutive. Failure to secure any necessary financing in a timely manner and on favorable terms could have a material adverse effect on our growth strategy, financial performance and stock price and could require us to delay or abandon clinical development plans. In addition, there is a risk that one or more of

our current service providers, manufacturers and other partners may not survive these difficult economic times, which could directly affect our ability to attain our operating goals on schedule and on budget.

At December 31, 2014, we had $119.5 million of cash and cash equivalents. While we are not aware of any downgrades, material losses, or other significant deterioration in the fair value of our cash equivalents since December 31, 2014, we cannot assure you that further deterioration of the global credit and financial markets would not negatively impact our current portfolio of cash equivalents or our ability to meet our financing objectives. Furthermore, our stock price may decline due in part to the volatility of the stock market and the general economic downturn.

We do not intend to pay dividends on our common stock so any returns will be limited to the value of our stock.

We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. Any return to stockholders will therefore be limited to the appreciation of their stock.

Our principal stockholders and management own a significant percentage of our stock and will be able to exert significant control over matters subject to stockholder approval.

Prior to this offering, our executive officers, directors, and 5% stockholders beneficially owned approximately 77.0% of our voting stock at March 31, 2015, and, upon the closing of this offering and the concurrent private placement, that same group will hold approximately 68.3% of our outstanding voting stock (assuming they do not purchase shares in this offering and assuming no exercise of the underwriters' option to purchase additional shares) in each case based on an assumed initial public offering price of $15.00 per share, which is the midpoint of the price range set forth on the cover of this prospectus. Upon the closing of this offering, assuming the purchase of $42.5 million of shares of our common stock by certain of our existing stockholders and their affiliated entities who have indicated an interest in purchasing such shares in this offering (or 2,833,333 shares at an assumed initial public offering price $15.00 per share, which is the midpoint of the price range set forth on the cover page of this prospectus) that same group will hold 73.1% of our outstanding stock. In addition, Morningside Venture (VI) Investments Limited, or MVIL, and Ultimate Keen Limited, or UKL, beneficially own approximately 35.5% and 10.7%, respectively, of our outstanding voting stock prior to the offering and will hold approximately 31.5% and 9.5%, respectively, of our outstanding voting stock upon the closing of the offering (assuming MVIL does not purchase shares in this offering and assuming no exercise of the underwriters' option to purchase additional shares) in each case based on an assumed initial public offering price of $15.00 per share, which is the midpoint of the price range set forth on the cover of this prospectus. UKL acquired shares of our stock from MVIL. MVIL and UKL have voted together in the past with respect to our common stock and plan to continue to act together with respect to our common stock. Together, they beneficially own approximately 46.2% of our outstanding voting stock prior to the offering and will hold approximately 41.0% of our outstanding voting stock upon the closing of the offering (assuming MVIL does not purchase shares in this offering and assuming no exercise of the underwriters' option to purchase additional shares) in each case based on an assumed initial public offering price of $15.00 per share, which is the midpoint of the price range set forth on the cover of this prospectus. Upon the closing of this offering, assuming the purchase of $7.5 million of shares of our common stock by MVIL (or 500,000 shares at an assumed initial public offering price of $15.00 per share, which is the midpoint of the price range set forth on the cover page of this prospectus), MVIL will hold 32.4% of our outstanding voting stock and, together with UKL, will hold 41.9% of our outstanding voting stock. Therefore, even after this offering and the concurrent private placement, these stockholders will have the ability to influence us through this ownership position. These stockholders may be able to determine all matters requiring stockholder approval. For example, these stockholders may be able to control elections of directors, amendments of our organizational documents, or approval of any merger, sale of assets, or other major corporate transaction. This may prevent or discourage unsolicited acquisition proposals or offers for our common stock that you may feel are in your best interest as one of our stockholders.

The concurrent private placement and the potential purchases of shares in this offering by certain of our principal stockholders and their affiliated entities will reduce the available public float for our common stock.

NIBR has entered into a stock purchase agreement with us to purchase approximately $25.0 million of shares of our common stock at a price per share equal to the initial public offering price (or 1,666,666 shares based on the assumed initial public offering price of $15.00 per share, which is the midpoint of the price range set forth on the cover page of this prospectus) in a private placement that would close concurrently with this offering. The sale of these shares to NIBR will not be registered in this offering. In addition, certain of our existing stockholders and their affiliated entities, including stockholders affiliated with our directors, have indicated an interest in purchasing up to approximately $42.5 million of shares of our common stock at a price per share equal to the initial public offering price (or approximately 2,833,333 shares based on the assumed initial public offering price of $15.00 per share, which is the midpoint of the price range set forth on the cover page of this prospectus).

The concurrent private placement and the potential purchases in this offering by certain of our existing stockholders and their affiliated entities may reduce the available public float for our common stock because our existing stockholders and their affiliates will be restricted from selling any shares purchased by them pursuant to either lock-up agreements or securities laws restrictions. As a result, the concurrent private placement and the sale of common stock to our existing stockholders and their affiliates may reduce the liquidity of our common stock relative to what it would have been had these shares been purchased by investors that were not affiliated with us.

If you purchase our common stock in this offering, you will incur immediate and substantial dilution in the book value of your shares.

The initial public offering price is substantially higher than the net tangible book value per share of our common stock. Investors purchasing common stock in this offering will pay a price per share that substantially exceeds the book value of our tangible assets after subtracting our liabilities. As a result, investors purchasing common stock in this offering will incur immediate dilution of $12.02 per share, based on an assumed initial public offering price of $15.00 per share, which is the midpoint of the price range set forth on the cover of this prospectus. Further, investors purchasing common stock in this offering and the concurrent private placement will contribute approximately 42.3% of the total amount invested by stockholders since our inception, but will own only approximately 11.7% of the shares of common stock outstanding after giving effect to this offering and the concurrent private placement.

This dilution is due to our investors who purchased shares prior to this offering having paid substantially less when they purchased their shares than the price offered to the public in this offering and the exercise of stock options granted to our employees. To the extent outstanding options or warrants are exercised, there will be further dilution to new investors. As a result of the dilution to investors purchasing shares in this offering, investors may receive significantly less than the purchase price paid in this offering, if anything, in the event of our liquidation. For a further description of the dilution that you will experience immediately after this offering, see “Dilution.”

We are an emerging growth company, and we cannot be certain if the reduced reporting requirements applicable to emerging growth companies will make our common stock less attractive to investors.

We are an emerging growth company, as defined in the JOBS Act. For as long as we continue to be an emerging growth company, we may take advantage of exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies, including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements and exemptions from the requirements of holding nonbinding advisory votes on executive compensation and stockholder approval of any golden parachute payments not previously approved. We could be an emerging growth company for up to five years following the year in which we complete this offering, although circumstances could cause us to lose that status earlier. We will remain an emerging growth company until the earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the completion of this offering, (b) in which we have total annual gross revenue of at least $1.0 billion or (c) in which we are deemed to be a

large accelerated filer, which requires the market value of our common stock that is held by non-affiliates to exceed $700.0 million as of the prior June 30th, and (2) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

Even after we no longer qualify as an emerging growth company, we may still qualify as a "smaller reporting company" which would allow us to take advantage of many of the same exemptions from disclosure requirements including not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act and reduced disclosure obligations regarding executive compensation in this prospectus and our periodic reports and proxy statements. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

Under the JOBS Act, emerging growth companies can also delay adopting new or revised accounting standards until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies. As a result, changes in rules of U.S. generally accepted accounting principles or their interpretation, the adoption of new guidance or the application of existing guidance to changes in our business could significantly affect our financial position and results of operations.

We will incur significant increased costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives.

As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company. We will be subject to the reporting requirements of the Securities Exchange Act of 1934, which will require, among other things, that we file with the Securities and Exchange Commission, or the SEC, annual, quarterly and current reports with respect to our business and financial condition. In addition, the Sarbanes-Oxley Act, as well as rules subsequently adopted by the SEC and the NASDAQ Global Market to implement provisions of the Sarbanes-Oxley Act, impose significant requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. Further, in July 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act, or the Dodd-Frank Act, was enacted. There are significant corporate governance and executive compensation related provisions in the Dodd-Frank Act that require the SEC to adopt additional rules and regulations in these areas such as "say on pay" and proxy access. Recent legislation permits emerging growth companies to implement many of these requirements over a longer period and up to five years from the pricing of this offering. We intend to take advantage of this new legislation but cannot guarantee that we will not be required to implement these requirements sooner than budgeted or planned and thereby incur unexpected expenses. Stockholder activism, the current political environment and the current high level of government intervention and regulatory reform may lead to substantial new regulations and disclosure obligations, which may lead to additional compliance costs and impact the manner in which we operate our business in ways we cannot currently anticipate.

We expect the rules and regulations applicable to public companies to substantially increase our legal and financial compliance costs and to make some activities more time-consuming and costly. If these requirements divert the attention of our management and personnel from other business concerns, they could have a material adverse effect on our business, financial condition and results of operations. The increased costs will decrease our net income or increase our net loss, and may require us to reduce costs in other areas of our business or increase the prices of our products or services. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to incur substantial costs to maintain the same or similar coverage. We cannot predict or estimate the amount or timing of additional costs we may incur to respond to these requirements. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers.

Sales of a substantial number of shares of our common stock by our existing stockholders in the public market could cause our stock price to fall.

If our existing stockholders sell, or indicate an intention to sell, substantial amounts of our common stock in the public market after the lock-up and other legal restrictions on resale discussed in this prospectus lapse, the trading price of our common stock could decline. Based on 50,479,916 shares of common stock outstanding, after giving effect to the conversion of preferred stock, at December 31, 2014, upon the closing of this offering and the concurrent private placement we will have outstanding a total of 57,146,582 shares of common stock. Of these shares, only the shares of common stock sold in this offering by us, plus any shares sold upon exercise of the underwriters' option to purchase additional shares, will be freely tradable without restriction in the public market immediately following this offering. Merrill, Lynch, Pierce, Fenner & Smith Incorporated and Leerink Partners LLC, however, may, in their sole discretion, permit our officers, directors and other stockholders who are subject to these lock-up agreements to sell shares prior to the expiration of the lock-up agreements.

We expect that the lock-up agreements pertaining to this offering will expire after 180 days from the date of this prospectus. In addition, shares of common stock that are either subject to outstanding options or reserved for future issuance under our 2015 Plan, will become eligible for sale in the public market to the extent permitted by the provisions of various vesting schedules, the lock-up agreements and Rule 144 and Rule 701 under the Securities Act. If these additional shares of common stock are sold, or if it is perceived that they will be sold, in the public market, the trading price of our common stock could decline.

After this offering, the holders of 47,701,554 shares of our common stock at December 31, 2014 will be entitled to rights with respect to the registration of their shares under the Securities Act, subject to the 180-day lock-up agreements described above. See "Description of Capital Stock—Registration Rights." Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction under the Securities Act, except for shares held by affiliates, as defined in Rule 144 under the Securities Act. Any sales of securities by these stockholders could have a material adverse effect on the trading price of our common stock.

Future sales and issuances of our common stock or rights to purchase common stock, including pursuant to our 2015 Plan, could result in additional dilution of the percentage ownership of our stockholders and could cause our stock price to fall.

We expect that significant additional capital may be needed in the future to continue our planned operations, including conducting clinical trials, commercialization efforts, expanded research and development activities and costs associated with operating a public company. To raise capital, we may sell common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. If we sell common stock, convertible securities or other equity securities, investors may be materially diluted by subsequent sales. Such sales may also result in material dilution to our existing stockholders, and new investors could gain rights, preferences and privileges senior to the holders of our common stock, including shares of common stock sold in this offering.

Pursuant to our 2015 Plan, certain amendments of which became effective on the business day prior to the public trading date of our common stock, our management is authorized to grant stock options to our employees, directors and consultants.

Initially, the aggregate number of shares of our common stock that may be issued pursuant to stock awards under our 2015 Plan is 6,134,292 shares. Additionally, the number of shares of our common stock reserved for issuance under our 2015 Plan will automatically increase on January 1 of each year, beginning on January 1, 2016 and continuing through and including January 1, 2025, by 4% of the total number of shares of our capital stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares determined by our board

of directors. Unless our board of directors elects not to increase the number of shares available for future grant each year, our stockholders may experience additional dilution, which could cause our stock price to fall.

We have broad discretion in the use of the net proceeds from this offering and the concurrent private placement and may not use them effectively.

Our management will have broad discretion in the application of the net proceeds from this offering and the concurrent private placement, including for any of the purposes described in the section entitled "Use of Proceeds," and you will not have the opportunity as part of your investment decision to assess whether the net proceeds are being used appropriately. Because of the number and variability of factors that will determine our use of the net proceeds from this offering and the concurrent private placement, their ultimate use may vary substantially from their currently intended use. Our management might not apply our net proceeds in ways that ultimately increase the value of your investment. We expect to use the net proceeds from this offering and the concurrent private placement, together with our existing cash and cash equivalents, to complete our Phase 2b ECLIPSE clinical trial, to advance the development of CRS-207 in pancreatic cancer and mesothelioma, for planned clinical development programs evaluating LADD regimens for glioblastoma multiforme and ovarian cancer, to manufacture CRS-207 and GVAX Pancreas at commercial scale in preparation for potential regulatory approval, for development of CDN product candidates and other planned research and development programs, and for general corporate and working capital purposes. The failure by our management to apply these funds effectively could harm our business. Pending their use, we may invest the net proceeds from this offering and the concurrent private placement in short-term, investment-grade, interest-bearing securities. These investments may not yield a favorable return to our stockholders. If we do not invest or apply the net proceeds from this offering and the concurrent private placement in ways that enhance stockholder value, we may fail to achieve expected financial results, which could cause our stock price to decline.

Anti-takeover provisions under our charter documents and Delaware law could delay or prevent a change of control which could limit the market price of our common stock and may prevent or frustrate attempts by our stockholders to replace or remove our current management.

Our amended and restated certificate of incorporation and amended and restated bylaws, which are to become effective immediately following the closing of this offering, contain provisions that could delay or prevent a change of control of our company or changes in our board of directors that our stockholders might consider favorable. Some of these provisions include:

- a board of directors divided into three classes serving staggered three-year terms, such that not all members of the board will be elected at one time;
- a prohibition on stockholder action through written consent, which requires that all stockholder actions be taken at a meeting of our stockholders;
- a requirement that special meetings of stockholders be called only by the chairman of the board of directors, the chief executive officer, or by a majority of the total number of authorized directors;
- advance notice requirements for stockholder proposals and nominations for election to our board of directors;
- a requirement that no member of our board of directors may be removed from office by our stockholders except for cause and, in addition to any other vote required by law, upon the approval of not less than two-thirds of all outstanding shares of our voting stock then entitled to vote in the election of directors;

- a requirement of approval of not less than two-thirds of all outstanding shares of our voting stock to amend any bylaws by stockholder action or to amend specific provisions of our certificate of incorporation; and

- the authority of the board of directors to issue preferred stock on terms determined by the board of directors without stockholder approval and which preferred stock may include rights superior to the rights of the holders of common stock.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporate Law, which may prohibit certain business combinations with stockholders owning 15% or more of our outstanding voting stock. These anti-takeover provisions and other provisions in our amended and restated certificate of incorporation and amended and restated bylaws could make it more difficult for stockholders or potential acquirors to obtain control of our board of directors or initiate actions that are opposed by the then-current board of directors and could also delay or impede a merger, tender offer or proxy contest involving our company. These provisions could also discourage proxy contests and make it more difficult for you and other stockholders to elect directors of your choosing or cause us to take other corporate actions you desire. Any delay or prevention of a change of control transaction or changes in our board of directors could cause the market price of our common stock to decline.

Our certificate of incorporation will provide that the Court of Chancery of the State of Delaware will be the exclusive forum for substantially all disputes between us and our stockholders, which could limit our stockholders' ability to obtain a favorable judicial forum for disputes with us or our directors, officers or employees.

Our certificate of incorporation will provide that the Court of Chancery of the State of Delaware is the exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a breach of fiduciary duty, any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our certificate of incorporation or our bylaws, or any action asserting a claim against us that is governed by the internal affairs doctrine. This provision may limit a stockholder's ability to bring a claim in a judicial forum that it finds favorable for disputes with us or our directors, officers or other employees, which may discourage such lawsuits against us and our directors, officers and other employees. Alternatively, if a court were to find this provision in our certificate of incorporation to be inapplicable or unenforceable in an action, we may incur additional costs associated with resolving such action in other jurisdictions, which could adversely affect our business and financial condition.

If securities or industry analysts do not publish research or publish inaccurate or unfavorable research about our business, our stock price and trading volume could decline.

The trading market for our common stock will depend in part on the research and reports that securities or industry analysts publish about us or our business. Securities and industry analysts do not currently, and may never, publish research on our company. If no securities or industry analysts commence coverage of our company, the trading price for our stock would likely be negatively impacted. In the event securities or industry analysts initiate coverage, if one or more of the analysts who covers us downgrades our stock or publishes inaccurate or unfavorable research about our business, our stock price may decline. If one or more of these analysts ceases coverage of our company or fails to publish reports on us regularly, demand for our stock could decrease, which might cause our stock price and trading volume to decline.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the sections titled “Prospectus Summary,” “Risk Factors,” “Use of Proceeds,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Business,” contains forward-looking statements about us and our industry that involve substantial risks and uncertainties. All statements, other than statements of historical facts contained in this prospectus, including statements regarding our future financial condition, business strategy and plans, and objectives of management for future operations, are forward-looking statements. In some cases you can identify these statements by forward-looking words such as “believe,” “may,” “will,” “estimate,” “continue,” “anticipate,” “intend,” “could,” “would,” “project,” “plan,” “expect” or the negative or plural of these words or similar expressions. These forward-looking statements include, but are not limited to, statements concerning the following:

- our history of net operating losses and uncertainty regarding our ability to achieve profitability;
- our ability to fund our working capital needs;
- our ability to develop and commercialize our product candidates;
- our ability to use and expand our technology platforms to build a pipeline of product candidates;
- our dependence on our lead product candidate, CRS-207, and GVAX Pancreas;
- our ability to obtain and maintain regulatory approval of our product candidates;
- our inability to operate in a competitive industry and compete successfully against competitors that have greater resources than we do;
- our ability to retain and attract key personnel;
- our products may not gain market acceptance;
- our reliance on third parties; and
- our ability to obtain and adequately protect intellectual property rights for our product candidates.

These statements are only current predictions and are subject to known and unknown risks, uncertainties and other factors that may cause our or our industry’s actual results, levels of activity, performance or achievements to be materially different from those anticipated by the forward-looking statements. We discuss many of these risks in this prospectus in greater detail under the heading “Risk Factors” and elsewhere in this prospectus. You should not rely upon forward-looking statements as predictions of future events. New risk factors and uncertainties may emerge from time to time, and it is not possible for management to predict all risks and uncertainties.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Except as required by law, after the date of this prospectus, we are under no duty to update or revise any of the forward-looking statements, whether as a result of new information, future events or otherwise.

We obtained industry, market and competitive position data in this prospectus from our own internal estimates and research as well as from industry and general publications and research surveys and studies conducted by third parties. These data involve a number of assumptions and limitations, and you are cautioned not to give undue weight to such information or estimates.

INDUSTRY AND MARKET DATA

This prospectus also contains estimates, projections and other information concerning our industry, the market in which we operate and our business. Unless otherwise indicated, information contained in this prospectus concerning our industry and the market in which we operate, including our general expectations and market position, market opportunity and market size, is based on information from various sources, such as reports, research surveys, studies and similar data prepared by third parties, industry, medical and general publications, government data and similar sources and is subject to a number of assumptions and limitations. Although we are responsible for all of the disclosure contained in this prospectus and we believe the information from the third-party sources included in this prospectus is reliable, such information is inherently imprecise. The industry in which we operate is subject to a high degree of uncertainty and risk due to a variety of factors, including those described in the section titled “Risk Factors.” These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us. In some cases, we do not expressly refer to the sources from which these data are derived. In that regard, when we refer to one or more sources of this type of data in any paragraph, you should assume that other data of this type appearing in the same paragraph are derived from the same sources, unless otherwise expressly stated or the context otherwise requires.

USE OF PROCEEDS

We estimate that the net proceeds from the sale of 5,000,000 shares of common stock in this offering, excluding the proceeds from the concurrent private placement, will be approximately $66.8 million at an assumed initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, after deducting the underwriting discount and estimated offering expenses payable by us. If the underwriters exercise their option to purchase additional shares in full, we estimate that the net proceeds will be approximately $77.2 million after deducting the underwriting discount and estimated offering expenses payable by us. Our net proceeds from the concurrent private placement will be $25.0 million.

Each $1.00 increase (decrease) in the assumed initial public offering price of $15.00 per share would increase (decrease) our net proceeds by $4.7 million, assuming the number of shares offered by us, as set forth on the cover of this prospectus, remains the same and after deducting the underwriting discount and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. An increase (decrease) of 1,000,000 in the number of shares we are offering would increase (decrease) the net proceeds to us from this offering, after deducting the underwriting discount and estimated offering expenses payable by us, by approximately $14.0 million, assuming the assumed initial public offering price stays the same.

We are undertaking this offering in order to access the public capital markets and to increase our liquidity. At December 31, 2014, we had cash and cash equivalents of $119.5 million. We intend to use the net proceeds of this offering and the concurrent private placement, together with our existing cash and cash equivalents, as follows:

- approximately $15.0 million to complete our ongoing ECLIPSE and STELLAR Phase 2b clinical trials in pancreatic cancer;
- approximately $40.0 million to advance the development of CRS-207 in additional indications, including planned Phase 2 clinical trials in mesothelioma and ovarian cancer;
- approximately $35.0 million to manufacture CRS-207 and GVAX Pancreas at commercial scale in preparation for potential regulatory approval;
- approximately $30.0 million for other research and development programs involving our LADD and CDN platforms, including ADU-S100; and
- the remainder for general corporate and working capital purposes.

However, due to the uncertainties inherent in the product development process, it is difficult to estimate with certainty the exact amounts of the net proceeds from this offering and the concurrent private placement that may be used for the above purposes. The amount and timing of our actual expenditures will depend upon numerous factors, including the results of our research and development efforts, the timing and success of our ongoing preclinical studies and clinical trials or preclinical studies and clinical trials we may commence in the future and the timing of regulatory submissions. As a result, our management will have broad discretion over the use of the net proceeds from this offering and the concurrent private placement.

We believe opportunities may exist from time to time to expand our current business through acquisitions or in-licenses of complementary companies, medicines or technologies. While we have no current agreements, commitments or understandings for any specific acquisitions or in-licenses at this time, we may use a portion of the net proceeds for these.

Pending the use of the proceeds from this offering and the concurrent private placement, we intend to invest the net proceeds in interest-bearing, investment-grade securities, certificates of deposit or direct or guaranteed obligations of the U.S. government.

DIVIDEND POLICY

We have never declared or paid cash dividends on our capital stock. We intend to retain all available funds and any future earnings, if any, to fund the development and expansion of our business and we do not anticipate paying any cash dividends in the foreseeable future. Any future determination related to dividend policy will be made at the discretion of our board of directors.

CAPITALIZATION

The following table sets forth our cash and cash equivalents and capitalization at December 31, 2014, as follows:

- on an actual basis;
- on a pro forma basis to reflect (i) the conversion of all outstanding shares of our convertible preferred stock into 50,117,919 shares of common stock and (ii) the reclassification to additional paid-in capital of our preferred stock warrant liability in connection with the conversion of our outstanding preferred stock warrants into common stock warrants; and
- on a pro forma as adjusted basis to further reflect the receipt of the estimated net proceeds from the sale of 6,666,666 shares of common stock in this offering and the concurrent private placement at an assumed initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the underwriting discount and estimated expenses payable by us.

You should read this table in conjunction with “Selected Consolidated Financial Data” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our consolidated financial statements included elsewhere in this prospectus.

	At December 31, 2014		
	Actual	Pro Forma	Pro Forma as Adjusted(1)
	(in thousands, except share and per share data)		
Cash and cash equivalents	$ 119,456	$ 119,456	$ 211,206
Convertible preferred stock warrant liability	$ 100	$ —	$ —
Convertible preferred stock, $0.0001 par value per share; 69,716,345 shares authorized, 69,608,339 shares issued and outstanding, actual; no shares authorized, issued and outstanding, pro forma and pro forma as adjusted	139,963	—	—
Stockholders’ (deficit) equity:			
Preferred stock, $0.0001 par value per share; no shares authorized, issued or outstanding, actual; 10,000,000 shares authorized, no shares issued and outstanding, pro forma and pro forma as adjusted	—	—	—
Common stock, $0.0001 par value per share; 85,000,000 shares authorized, 361,997 shares issued and outstanding, actual; 300,000,000 shares authorized, 50,479,916 shares issued and outstanding, pro forma; 57,146,582 shares issued and outstanding, pro forma as adjusted	—	5	6
Additional paid-in capital	346	140,404	232,153
Accumulated deficit	(61,643)	(61,643)	(61,643)
Total stockholders’ (deficit) equity	(61,297)	78,766	170,516
Total capitalization	$ 78,766	$ 78,766	$ 170,516

(1) A $1.00 increase (decrease) in the assumed initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) each of cash and cash equivalents, additional paid-in capital, total capitalization and total stockholders’ equity by $4.7 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting the underwriting discount and estimated offering expenses payable by

us. Each increase (decrease) of 1,000,000 shares in the number of shares offered by us would increase (decrease) cash and cash equivalents, additional paid-in capital, total capitalization and total stockholders' equity by approximately $14.0 million, assuming an initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the underwriting discount and estimated offering expenses payable by us. The pro forma as adjusted information discussed above is illustrative only and will be adjusted based on the actual public offering price and other terms of this offering determined at pricing.

The number of shares of common stock in the table above excludes:

- 1,699,940 shares of common stock issuable upon the conversion of Series E convertible preferred stock issued after December 31, 2014;
- 5,970,382 shares of common stock issuable upon the exercise of outstanding stock options at December 31, 2014, with a weighted-average exercise price of $0.80 per share;
- 3,181,929 shares of common stock issuable upon the exercise of outstanding options that were granted after December 31, 2014, with a weighted-average exercise price of $1.82 per share;
- 77,755 shares of common stock issuable upon the exercise of preferred stock warrants at December 31, 2014, with a weighted-average exercise price of $1.69 per share;
- 1,154,270 shares of common stock issuable upon the exercise of outstanding common stock warrants at December 31, 2014, with a weighted-average exercise price of $0.25 per share;
- 332,826 shares of common stock reserved for future issuance under our 2009 Stock Plan, which will become available for issuance under our 2015 Plan after consummation of this offering;
- 6,134,292 shares of common stock, subject to increase on an annual basis, reserved for future issuance under our 2015 Plan, which will become effective immediately prior to the consummation of this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this benefit plan; and
- 720,000 shares of common stock to be reserved for issuance under our ESPP, which will become effective immediately prior to the consummation of this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this benefit plan.

DILUTION

If you invest in our common stock, your interest will be diluted to the extent of the difference between the initial public offering price per share of our common stock and the pro forma as adjusted net tangible book value per share of our common stock immediately after this offering.

Net tangible book value per share is determined by dividing our total tangible assets less our total liabilities by the number of shares of common stock outstanding. Our historical net tangible book deficit at December 31, 2014, was $(61.3) million, or $(169.30) per share of common stock. Our pro forma net tangible book value at December 31, 2014, before giving effect to this offering and the concurrent private placement, was $78.8 million, or $1.56 per share of common stock, based on the total number of shares of our common stock outstanding at December 31, 2014, after giving effect to the conversion of all outstanding shares of our convertible preferred stock into common stock. Pro forma net tangible book value, before giving effect to this offering and the concurrent private placement, gives effect to the conversion of all outstanding shares of our convertible preferred stock into an aggregate of 50,117,919 shares of our common stock.

Dilution per share to new investors represents the difference between the amount per share paid by purchasers of shares of common stock in this offering and the concurrent private placement and the pro forma as adjusted net tangible book value per share of common stock immediately after completion of this offering and the concurrent private placement. After giving effect to our sale of shares of common stock in this offering and the concurrent private placement at an assumed initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover of this prospectus, and after deducting the underwriting discount and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value at December 31, 2014 would have been $170.5 million, or $2.98 per share. This represents an immediate increase in pro forma net tangible book value of $1.42 per share to existing stockholders and an immediate dilution of $12.02 per share to investors participating in this offering, as illustrated in the following table:

Assumed initial public offering price per share		$15.00
Historical net tangible book value (deficit) per share at December 31, 2014	$(169.30)	
Pro forma net tangible book value per share at December 31, 2014, before giving effect to this offering and the concurrent private placement	1.56	
Increase in pro forma net tangible book value (deficit) per share attributable to new investors purchasing shares in this offering and the concurrent private placement	$ 1.42	
Pro forma as adjusted net tangible book value per share after giving effect to this offering and the concurrent private placement		2.98
Dilution per share to investors participating in this offering and the concurrent private placement		$12.02

Each $1.00 increase (decrease) in the assumed public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) our pro forma as adjusted net tangible book value by approximately $4.7 million, or approximately $0.09 per share, and the dilution per share to investors in this offering by approximately $0.91 per share, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the underwriting discount and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. An increase (decrease) of 1,000,000 shares in the number of shares offered by us would increase (decrease) our pro forma as adjusted net tangible book value by approximately $14.0 million, or approximately $0.24 per share, and the pro forma dilution per share to investors in this offering by approximately $0.76 per share, assuming an initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the underwriting discount and estimated offering expenses payable by us. The pro forma as adjusted information discussed above is illustrative only and will be adjusted based on the actual public offering price and other terms of this offering determined at pricing.

If the underwriters' option to purchase additional shares is exercised in full, the pro forma as adjusted net tangible book value per share after this offering would be $3.13 per share, the increase in pro forma as adjusted net tangible book value per share to existing stockholders would be $1.57 per share and the dilution to new investors purchasing shares in this offering would be $11.87 per share.

The following table presents, on a pro forma as adjusted basis described above, the differences between the existing stockholders and the purchasers of shares in this offering and the concurrent private placement with respect to the number of shares purchased from us, the total consideration paid, which includes net proceeds received from the issuance of common and convertible preferred stock and cash received from the exercise of stock options (in thousands, except per share amounts and percentages):

	Total Shares		Total Consideration		Average Price per Share
	Number	Percent	Amount	Percent	
Existing stockholders before this offering	50,480	88.3%	$136,358	57.7%	$ 2.70
Concurrent private placement investor	1,667	2.9	25,000	10.6	15.00
Investors participating in this offering	5,000	8.8	75,000	31.7	15.00
Total	57,147	100%	$236,358	100%	$ 4.14

Each $1.00 increase (decrease) in the assumed initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, would increase (decrease) the total consideration paid to us by new investors and total consideration paid to us by all stockholders by $4.7 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting the underwriting discount and estimated offering expenses payable by us. An increase (decrease) of 1,000,000 shares in the number of shares offered by us would increase (decrease) the total consideration paid to us by new investors and total consideration paid to us by all stockholders by $14.0 million, assuming an initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus, and after deducting the underwriting discount and estimated offering expenses payable by us.

The calculations above are based on 50,479,916 shares outstanding at December 31, 2014 after giving effect to the conversion of all outstanding shares of convertible preferred stock into common stock and exclude:

- 1,699,940 shares of common stock issuable upon the conversion of Series E convertible preferred stock issued after December 31, 2014;
- 5,970,382 shares of common stock issuable upon the exercise of outstanding stock options at December 31, 2014, with a weighted-average exercise price of $0.80 per share;
- 3,181,929 shares of common stock issuable upon the exercise of outstanding options that were granted after December 31, 2014, with a weighted-average exercise price of $1.82 per share;
- 77,755 shares of common stock issuable upon the exercise of preferred stock warrants at December 31, 2014, with a weighted-average exercise price of $1.69 per share;
- 1,154,270 shares of common stock issuable upon the exercise of outstanding common stock warrants at December 31, 2014, with a weighted-average exercise price of $0.25 per share;
- 332,826 shares of common stock reserved for future issuance under our 2009 Stock Plan, which will become available for issuance under our 2015 Plan after consummation of this offering;
- 6,134,292 shares of common stock, subject to increase on an annual basis, reserved for future issuance under our 2015 Plan, which will become effective immediately prior to the consummation

of this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this benefit plan; and

- 720,000 shares of common stock to be reserved for issuance under our ESPP, which will become effective immediately prior to the consummation of this offering, as well as any automatic increases in the number of shares of common stock reserved for future issuance under this benefit plan.

To the extent that any outstanding options are exercised, new options are issued under our stock-based compensation plans or we issue additional shares of common stock in the future, there will be further dilution to investors participating in this offering.

JJDC, an existing stockholder, has indicated an interest in purchasing up to approximately $30.0 million of shares of our common stock in this offering at the initial public offering price. Certain other of our existing stockholders, including stockholders affiliated with our directors, have indicated an interest in purchasing up to an additional approximately $12.5 million of shares of our common stock in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters may determine to sell more, fewer or no shares in this offering to any of these parties, or any of these parties may determine to purchase more, fewer or no shares in this offering.

SELECTED CONSOLIDATED FINANCIAL DATA

The selected consolidated financial data included in this section are not intended to replace the consolidated financial statements included elsewhere in this prospectus. We derived the selected consolidated statements of operations data for the years ended December 31, 2013 and 2014 and the selected consolidated balance sheet data at December 31, 2013 and 2014 from our audited consolidated financial statements included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results that may be expected in the future. You should read the selected historical consolidated financial data below in conjunction with the section titled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the audited consolidated financial statements included elsewhere in this prospectus.

	Year Ended December 31,	
	2013	2014
	(in thousands, except share and per share data)	
Consolidated Statements of Operations Data:		
Revenue:		
Collaboration and license revenue	$ —	$ 13,038[3]
Grant revenue	828	351
Total revenue	828	13,389
Operating expenses:		
Research and development[1]	10,687	23,513
General and administrative[1]	4,677	8,994
Total operating expenses	15,364	32,507
Loss from operations	(14,536)	(19,118)
Interest expense	(1,371)	(2,395)[4]
Gain on extinguishment of convertible promissory notes	—	3,553[5]
Other (expense) income, net	(147)	946
Net loss and comprehensive loss	$ (16,054)	$ (17,014)
Net loss per common share, basic and diluted[2]	$ (55.80)	$ (53.06)
Shares used in computing net loss per common share, basic and diluted[2]	287,711	320,686
Pro forma net loss per common share, basic and diluted[2]		$ (0.70)
Shares used in computing pro forma net loss per common share, basic and diluted[2]		28,042,827

(1) Includes stock-based compensation as follows:

	Year Ended December 31,	
	2013	2014
	(in thousands)	
Research and development	$ 194	$ 202
General and administrative	215	368
Total stock-based compensation	$ 409	$ 570

(2) See Note 16 to our audited consolidated financial statements included elsewhere in this prospectus for an explanation of the calculations of our basic and diluted net loss per common share, pro forma net loss per common share and the weighted-average number of shares used in the computation of the per share amounts.

(3) Represents the revenue recognized in connection with our collaboration agreements entered into with Janssen in May and November 2014. See Note 7 to our audited consolidated financial statements included elsewhere in this prospectus.

(4) Includes amortization of debt discount associated with convertible promissory notes due to the issuance of warrants and beneficial conversion feature associated with such convertible promissory notes. See Note 5 to our audited consolidated financial statements included elsewhere in this prospectus.

(5) Upon the conversion of convertible promissory notes to related parties into Series C convertible preferred stock in May 2014, a gain on extinguishment was recorded because the amount allocated to reacquire the convertible notes was less than the carrying value of the notes. See Note 5 to our audited consolidated financial statements included elsewhere in this prospectus.

	At December 31,	
	2013	2014
	(in thousands)	
Consolidated Balance Sheet Data:		
Cash and cash equivalents	$ 8,532	$ 119,456
Working capital	(5,075)	81,006
Total assets	9,880	126,462
Note payable to related party	200	—
Convertible promissory notes payable to related parties, net	12,789	—
Convertible preferred stock warrant liability	72	100
Common stock warrant liability	505	889
Convertible preferred stock	32,224	139,963
Accumulated deficit	(44,629)	(61,643)
Total stockholders' deficit	(38,758)	(61,297)

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with the section of this prospectus titled "Selected Consolidated Financial Data" and our consolidated financial statements included elsewhere in this prospectus. This discussion and other parts of this prospectus contain forward-looking statements that involve risk and uncertainties, such as statements of our plans, objectives, expectations and intentions. As a result of many factors, including those factors set forth in the "Risk Factors" section of this prospectus, our actual results could differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

We are a clinical-stage immuno-oncology company focused on the development of first-in-class technology platforms designed to stimulate robust and durable immune responses against cancer, and our lead product candidate is in a randomized controlled Phase 2b clinical trial in metastatic pancreatic cancer. Immuno- oncology encompasses a class of therapies that leverage the patient's immune system to slow the growth and spread of, or eliminate, tumor cells. We believe a critical distinguishing factor in our approach to immuno- oncology is that our novel therapies initiate powerful innate immune responses and drive targeted, durable adaptive immune responses. The immunotherapy field is rapidly advancing with new immuno-oncology combinations that focus on strengthening therapeutic efficacy in a wide range of cancers. We intend to pursue a broad strategy of combining our technology platforms with conventional and novel immuno-oncology therapies, based on their mechanisms of action, safety profiles and versatility. Our pipeline of immuno-oncology product candidates is derived from two proprietary technology platforms: Live, Attenuated, Double-Deleted, or LADD, *Listeria monocytogenes* and cyclic dinucleotides, or CDNs. Our lead LADD product candidate, CRS-207, is currently being developed in metastatic pancreatic cancer and unresectable malignant pleural mesothelioma. In a completed randomized controlled Phase 2a clinical trial in metastatic pancreatic cancer patients, CRS-207 demonstrated a statistically significant improvement in overall survival when combined with GVAX Pancreas, a cellular vaccine product candidate. The 93-patient two-arm Phase 2a clinical trial was designed to compare the combination of CRS-207 and GVAX Pancreas versus GVAX Pancreas alone. The trial met the primary efficacy endpoint of overall survival at an interim analysis and was stopped upon recommendation from the Data Monitoring Committee. Based on the data from this study, our lead immuno-oncology regimen of CRS-207 and GVAX Pancreas was granted Breakthrough Therapy designation by the U.S. Food and Drug Administration, or FDA. Breakthrough Therapy designation is intended to expedite the development and review of products that treat serious or life-threatening conditions. We have obtained orphan drug designations from the FDA for CRS-207 and GVAX Pancreas for the treatment of pancreatic cancer and for CRS-207 for the treatment of mesothelioma. Under the Orphan Drug Act, the FDA may grant orphan drug designation to a drug or biologic intended to treat a rare disease or condition. Orphan drug designation entitles a party to certain financial incentives and can provide limited market exclusivity in certain circumstances. We are developing a pipeline of proprietary product candidates, including two product candidates in collaboration with Janssen Biotech, Inc., or Janssen, targeting prostate and lung cancer. In addition, we established a worldwide collaboration with Novartis Pharmaceuticals Corporation, or Novartis, for CDN product candidates in oncology. We have intellectual property protection on both of our technology platforms and each of our product candidates, which we believe we will maintain into the 2030s.

Both of our technology platforms, LADD and CDN, are designed to activate and stimulate a patient's immune system to specifically target cancer cells. Our LADD technology platform is based on a naturally pathogenic bacterium, *Listeria monocytogenes*, which induces a strong innate immune response. In order to engineer this bacterium for therapeutic use, we modify the *Listeria* with two proprietary gene deletions, substantially reducing its natural disease-causing properties. We then engineer specific LADD product candidates to express and secrete tumor antigens that stimulate the adaptive immune system to mount a powerful cellular attack on tumors. The intended effect is to prime and enhance the innate and adaptive immune responses and deliver an antigen-specific T cell attack against the target tumor cells. Our proprietary CDN technology platform comprises synthetic small molecule immune modulators that target and activate Stimulator of Interferon Genes, or STING,

receptors that are generally expressed at high levels in immune cells. Once activated, STING receptors prime and enhance the innate immune response by signaling through multiple distinct pathways. These signals activate the expression of a broad profile of cytokines that initiate the development of an effective adaptive immune response. Recent advancements reported in numerous leading scientific journals have created interest in the potential for STING receptor-targeting drug candidates for a broad range of therapeutic applications.

Our pipeline of product candidates has the potential to be applicable to a variety of cancers and to be combinable with many conventional and emerging cancer therapies, including cellular vaccines, chemotherapy, radiotherapy and checkpoint inhibitors, among others. Our most advanced immuno-oncology regimen, currently in a Phase 2b clinical trial known as ECLIPSE, assesses the combination of our lead LADD product candidate, CRS-207, with GVAX Pancreas to treat late-stage metastatic pancreatic cancer patients who have received at least one prior line of therapy. GVAX Pancreas is a potentially synergistic combination candidate that is designed to induce T cells against an array of pancreatic cancer antigens to enable a broad-based immune response, and has demonstrated a favorable safety profile in clinical trial to date. We expect to report top line results from ECLIPSE in the first half of 2016. In addition, we are evaluating CRS-207 in combination with chemotherapy in unresectable malignant pleural mesothelioma and have a planned study of CRS-207 in combination with GVAX Pancreas and an anti-PD-1 checkpoint inhibitor in metastatic pancreatic cancer. We also have ongoing and planned clinical development programs evaluating LADD regimens for glioblastoma multiforme and ovarian cancer, and collaborations with Janssen for lung and prostate cancers. We also envision multiple product opportunities for the CDN technology platform. Because STING receptors are known to be important for immune surveillance and control of cancer progression, we believe that STING receptors represent an attractive target for novel drug candidates. We are developing CDN product candidates as impactful therapies that are intended to prime and enhance the innate and adaptive immune responses. Based on their mechanism of action, our CDN product candidates may also have synergistic or additive benefits when combined with other cancer therapies.

Since commencing our operations, our efforts have been focused on research, development and the advancement of our product candidates into clinical trials. As a result we have incurred significant losses. We have funded our operations primarily through the sale of convertible preferred stock, the issuance of convertible promissory notes, revenue from government grants and licensing agreements with pharmaceutical partners. We incurred a net loss of $16.1 million and $17.0 million for the years ended December 31, 2013 and 2014, respectively. At December 31, 2014, our accumulated deficit was $61.6 million.

Financial Operations Overview

Revenue

We have not generated any revenue from product sales. Our revenue to date has been primarily derived from research and development grants from the U.S. government and two separate research and license agreements we entered into with Janssen, which became effective in May 2014 and in November 2014. We recognize revenue related to research and development grants when the related research expenses are incurred and our specific performance obligations under the terms of the respective contracts are satisfied. We recognize revenue from upfront payments under our Janssen agreements ratably over the term of our estimated period of performance under the agreement. In addition to receiving upfront payments, we may also be entitled to milestone and other contingent payments upon achieving predefined objectives. Revenue from milestones, if they are nonrefundable and deemed substantive, are recognized upon successful accomplishment of the milestones. To the extent that non-substantive milestones are achieved and we have remaining performance obligations, milestones are deferred and recognized as revenue over the estimated remaining period of performance.

We expect that any revenue we generate from our research and license agreements with Janssen, government research and development grants, and any future collaboration partners will fluctuate from year to year as a result of the timing and amount of milestones and other payments.

Research and Development Expenses

The largest component of our total operating expenses has historically been our investment in research and development activities, including the clinical development of our product candidates. Research and development expenses represent costs incurred to conduct research, such as the discovery and development of our product candidates, as well as the development of product candidates pursuant to our research and license agreement with Janssen. We recognize all research and development costs as they are incurred. Clinical trial costs, contract manufacturing and other development costs incurred by third parties are expensed as the contracted work is performed.

We expect our research and development expenses to increase in absolute dollars in the future as we advance our product candidates into and through clinical trials and pursue regulatory approval of our product candidates. The process of conducting the necessary clinical research to obtain regulatory approval is costly and time-consuming. The actual probability of success for our product candidates and technology platforms may be affected by a variety of factors including: the quality of our product candidates, early clinical data, investment in our clinical program, competition, manufacturing capability and commercial viability. We may never succeed in achieving regulatory approval for any of our product candidates. As a result of the uncertainties discussed above, we are unable to determine the duration and completion costs of our research and development projects or when and to what extent we will generate revenue from the commercialization and sale of our product candidates.

General and Administrative Expenses

General and administrative expenses include personnel costs, expenses for outside professional services and other allocated expenses. Personnel costs consist of salaries, bonuses, benefits and stock-based compensation. Outside professional services consist of legal, accounting and audit services and other consulting fees. Allocated expenses consist of rent expense related to our office and research and development facility. We expect to incur additional expenses as a result of operating as a public company, including expenses related to compliance with the rules and regulations of the Securities and Exchange Commission, and those of any national securities exchange on which our securities are traded, additional insurance expenses, investor relations activities and other administrative and professional services.

Interest Expense

Interest expense consists of amortization of debt discount associated with convertible promissory note warrants, issuance of the equity component of a convertible promissory note and beneficial conversion features associated with certain convertible promissory notes, as well as stated interest costs associated with our borrowings.

Gain on Extinguishment of Convertible Promissory Notes

During 2013 and 2014, we issued convertible promissory notes to related parties, which were subsequently converted in May 2014 to Series C convertible preferred stock. The conversion of convertible promissory notes was determined to be an extinguishment of debt and a portion of the reacquisition price was allocated to the reacquisition of the embedded beneficial conversion feature. We recorded a gain on extinguishment, as the amount allocated to reacquire the notes was less than the carrying value of the notes.

Other Income (Expense), Net

Other income (expense), net, consists of gains and losses from the remeasurement of the fair value of our liabilities related to our convertible preferred stock warrants and common stock warrants, the change in the fair value of the preferred stock derivative liability associated with our obligation to issue additional shares of Series C convertible preferred stock, and interest income earned on our cash and cash equivalents.

Our convertible preferred stock warrants are exercisable into shares that are contingently redeemable and our common stock warrants are subject to performance conditions that may result in the issuance of a variable number of shares. As such, we have classified these warrants as liabilities in the consolidated balance sheets at their estimated fair values, and we record the change in the estimated fair values each reporting period as other income (expense), net. We will continue to record adjustments to the estimated fair values of the convertible preferred stock and common stock warrants until they are exercised or expire.

In May 2014, we entered into a Series C convertible preferred stock purchase agreement. Under the agreement, we agreed to issue to the purchasers, and the purchasers agreed to purchase, additional shares of our Series C convertible preferred stock in tranches within a specified timeframe after the initial closing. We determined that the obligation to issue additional Series C convertible preferred stock at future dates was a freestanding financial instrument that should be accounted for as a liability. Accordingly, we recorded a preferred stock derivative liability related to this instrument at the time of the initial close in May 2014, and we remeasured the liability at fair value at each reporting period with the corresponding gain or loss from the adjustment recorded as other income (expense), net until the tranche obligation either expired or was fulfilled. In December 2014, the final tranche of the Series C convertible preferred stock was issued and the corresponding preferred stock derivative liability was remeasured and then reclassified as equity.

Results of Operations

Comparison of the Years Ended December 31, 2013 and 2014

	Year Ended December 31,		Change
	2013	2014	$
	(in thousands)		
Revenue:			
Collaboration and license revenue	$ —	$ 13,038	$13,038
Grant revenue	828	351	(477)
Total revenue	828	13,389	12,561
Operating expenses:			
Research and development	10,687	23,513	12,826
General and administrative	4,677	8,994	4,317
Total operating expenses	15,364	32,507	17,143
Loss from operations	(14,536)	(19,118)	(4,582)
Interest expense	(1,371)	(2,395)	(1,024)
Gain on extinguishment of convertible promissory notes	—	3,553	3,553
Other income (expense), net	(147)	946	1,093
Net loss and comprehensive loss	$(16,054)	$(17,014)	$ (960)

Revenue

Collaboration and license revenue was $13.0 million for the year ended December 31, 2014, due to recognition of a portion of the upfront fees and substantive and non-substantive development-related milestones achieved under the Janssen agreements.

Grant revenue was $0.4 million for the year ended December 31, 2014, a decrease of $0.5 million compared to the year ended 2013, primarily due to our focus on other research and development activities which resulted in a decrease in grant-related research and development in 2014.

Research and Development Expenses

The following table summarizes our research and development expenses incurred during the years ended December 31, 2013 and 2014:

	Year Ended December 31,		Change
	2013	2014	$
		(in thousands)	
Clinical development	$ 3,196	$ 7,547	$ 4,351
Contract manufacturing	1,323	5,246	3,923
Other research and development costs	1,244	3,611	2,367
Compensation and related personnel costs	3,245	5,212	1,967
Licensing fees	461	1,617	1,156
Facility costs	218	280	62
Acquired GVAX technology	1,000	—	(1,000)
Total research and development	$10,687	$23,513	$12,826

Research and development expenses were $23.5 million for the year ended December 31, 2014, an increase of $12.8 million, compared to the year ended 2013. The increase was primarily attributed to a $4.4 million increase in clinical development expenses mainly associated with ongoing trials for our lead indication in pancreatic cancer; a $3.9 million increase in contract manufacturing costs of our clinical product candidates; a $2.4 million increase in other research and development costs; a $2.0 million increase in compensation expenses primarily related to additional research and development staff; and a $1.2 million increase in licensing fees primarily due to payment of sublicense fees in connection with the research and license agreement with Janssen. The increase was partially offset by the $1.0 million expense recognized in 2013 related to the acquisition of GVAX technology from BioSante Pharmaceuticals, Inc. (which later merged into ANI Pharmaceuticals, Inc.).

General and Administrative Expenses

The following table summarizes our general and administrative expenses incurred during the years ended December 31, 2013 and 2014:

	Year Ended December 31,		Change
	2013	2014	$
		(in thousands)	
Outside professional services	$2,117	$4,784	$2,667
Compensation and related personnel costs.	1,895	3,026	1,131
Facility costs	375	648	273
Other general and administrative	290	536	246
Total general and administrative	$4,677	$8,994	$4,317

General and administrative expenses were $9.0 million for the year ended December 31, 2014, an increase of $4.3 million, compared to the year ended 2013. The increase was primarily due to a $2.7 million increase in legal fees related to licensing and general corporate matters and other professional services fees, including accounting fees, as well as a $1.1 million increase in compensation expenses primarily related to our additional administrative personnel.

Interest Expense

Interest expense was $2.4 million for the year ended December 31, 2014, an increase of $1.0 million, compared to the year ended 2013. The increase was primarily attributed to the amortization of debt discount

associated with the warrants and beneficial conversion feature associated with our convertible promissory notes payable to related parties.

Gain on Extinguishment of Convertible Promissory Notes

During 2013 and 2014, we issued convertible promissory notes to related parties, which were subsequently converted in May 2014 to Series C convertible preferred stock. The conversion of convertible promissory notes was determined to be an extinguishment of debt and a portion of the reacquisition price was allocated to the reacquisition of the embedded beneficial conversion feature. We recorded a gain on extinguishment of $3.6 million during the year ended December 31, 2014, as the amount allocated to reacquire the notes was less than the carrying value of the notes.

Other Income (Expense), Net

Other income (expense), net increased by $1.1 million for the year ended December 31, 2014, compared to the year ended 2013. The increase was primarily due to the remeasurement of the fair value of the preferred stock derivative liability associated with the future issuance of our Series C convertible preferred stock. At December 31, 2014, there was no obligation remaining related to the future issuance of our Series C convertible preferred stock and therefore no preferred stock derivative liability on the consolidated balance sheets. The increase was partially offset by other expenses recognized for remeasurement of common and preferred stock warrants.

Liquidity and Capital Resources

Our operations have been financed primarily by net proceeds from the sale of convertible preferred stock, issuance of convertible promissory notes, revenue from government grants and proceeds from our Janssen research and license agreements. At December 31, 2014, we had cash and cash equivalents of $119.5 million.

Our primary uses of capital are, and we expect will continue to be, compensation and related expenses, third-party clinical research and development services, laboratory and related supplies, clinical costs and other regulatory expenses. Cash used to fund operating expenses is impacted by the timing of when we pay expenses, as reflected in the change in our outstanding accounts payable and accrued expenses. We expect to incur substantial expenditures in the foreseeable future for the development and potential commercialization of our product candidates. Specifically, we have incurred and we expect to continue to incur substantial expenses in connection with our Phase 2b ECLIPSE clinical trial for metastatic pancreatic cancer.

We plan to continue to fund our operations and capital funding needs through equity and/or debt financing. We may also consider entering into additional collaboration arrangements or selectively partnering for clinical development and commercialization. The sale of additional equity would result in additional dilution to our stockholders. The incurrence of debt financing would result in debt service obligations and the instruments governing such debt could provide for operating and financing covenants that would restrict our operations. If we are not able to secure adequate additional funding, we may be forced to make reductions in spending, extend payment terms with suppliers, liquidate assets where possible and/or suspend or curtail planned programs. Any of these actions could harm our business, results of operations, financial condition and future prospects.

Cash Flows

The following table summarizes our cash flows for the periods indicated:

	Year Ended December 31,	
	2013	2014
	(in thousands)	
Net cash provided by (used in):		
Operating activities	$(14,232)	$ 19,365
Investing activities	(170)	(782)
Financing activities	19,239	92,341
Net change in cash and cash equivalents	$ 4,837	$110,924

Operating Activities

Net cash provided by operating activities was $19.4 million for the year ended December 31, 2014, compared to net cash used of $14.2 million for the year ended 2013. The increase in net cash provided was primarily due to the upfront and milestone payments totaling $46.0 million received from the research and license agreements with Janssen during 2014, partially offset by increased operating expenses due to additional headcount, increased clinical trial activities and other research and development.

Investing Activities

Net cash used in investing activities was $0.8 million for the year ended December 31, 2014, compared to $0.2 million for the year ended 2013. The increase in net cash used was primarily the result of investment in laboratory and office equipment, furniture and leasehold improvements.

Financing Activities

Net cash provided by financing activities was $92.3 million for the year ended December 31, 2014, compared to $19.2 million for the year ended 2013. The increase was primarily related to $51.4 million in gross proceeds from the issuance of Series D convertible preferred stock, $41.9 million in net proceeds from the issuance of Series C convertible preferred stock and $0.3 million in proceeds from the issuance of convertible promissory notes, which were converted into Series C convertible preferred stock in May 2014. The increase in financing activities was partially offset by $1.1 million of payments made related to preparing to become a public company.

Operating Capital Requirements and Plan of Operations

We do not expect to generate significant revenue from product sales unless and until we obtain regulatory approval of and commercialize our current or any future product candidates. We anticipate that we will continue to generate losses for the foreseeable future, and we expect the losses to increase as we continue the development of and seek regulatory approvals for our product candidates and begin to commercialize any approved products. We are subject to all of the risks pertinent to the development of new products, and we may encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may harm our business. Upon the closing of this offering, we expect to incur additional costs associated with operating as a public company and we anticipate that we will need substantial additional funding in connection with our continuing operations.

We believe that our existing capital resources, not including potential milestone payments and the proceeds we receive from this offering, will be sufficient to meet our projected operating requirements through

the end of 2016. If we need to raise additional capital to fund our operations and complete our ongoing and planned clinical studies, funding may not be available to us on acceptable terms, or at all.

Our future funding requirements will depend on many factors, including the following:

- the scope, rate of progress, results and cost of our clinical studies and other related activities;
- the cost of manufacturing clinical supplies and establishing commercial supplies of our product candidate and any other products that we may develop;
- the cost, timing and outcomes of regulatory approvals;
- the cost and timing of establishing sales, marketing and distribution capabilities;
- the terms and timing of any collaborative, licensing and other arrangements that we may establish, including any required milestone and royalty payments thereunder; and
- the emergence of competing technologies or other adverse market developments.

Critical Accounting Polices and Significant Judgments and Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with generally accepted accounting principles in the United States, or GAAP. The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported revenue generated and expenses incurred during the reporting periods. Our estimates are based on our historical experience and on various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We believe that the accounting policies discussed below are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving management's judgments and estimates.

Revenue Recognition

We have historically generated revenue through government grants and, beginning in 2014, from funds received under research and license arrangements. Government grants provide funding for certain types of expenditures in connection with research and development activities over a contractually-defined period. Revenue related to government grants is recognized in the period during which the related costs are incurred and the related services are rendered, provided that the applicable performance obligations under the government grants have been met. We intend to continue to evaluate pursuing additional government grant opportunities on a case-by-case basis.

Revenues from research activities made under collaboration arrangements are recognized when there is persuasive evidence that an arrangement exists, services have been rendered, the price is fixed or determinable and collectability is reasonably assured. Revenue generated from our collaboration arrangements is not subject to repayment and typically includes upfront fees, milestone payments and royalties on future licensee's product sales. Our obligations under collaboration agreements may include the transfer of intellectual property rights in the form of licenses, obligations to provide research and development services and obligations to participate on certain development committees with the collaboration party. We make judgments that affect the period over which we recognize revenue. On a quarterly basis, we review our estimated period of performance for our

collaboration and license revenue based on the progress under the arrangement and account for the impact of any changes in estimated periods of performance on a prospective basis. We record amounts received prior to satisfying the above revenue recognition criteria as deferred revenue until all applicable revenue recognition criteria are met. Deferred revenue represents the portion of research or license payments received that have not been earned.

For revenue agreements with multiple-element arrangements, such as license and development agreements, we allocate revenue to each non-contingent element based on the relative selling price of each element. When applying the relative selling price method, we determine the selling price for each deliverable using vendor-specific objective evidence or third-party evidence. If neither exists, we use the best estimate of selling price for that deliverable. Revenue allocated is then recognized when the four basic revenue recognition criteria are met for each element. Our obligations under the agreements may include the transfer of intellectual property rights in the form of licenses, obligations to provide research and development services and obligations to participate on certain development committees.

Milestones are considered substantive if all of the following conditions are met: (1) the milestone is nonrefundable; (2) achievement of the milestone was not reasonably assured at the inception of the arrangement; (3) substantive effort is involved to achieve the milestone; and (4) the amount of the milestone appears reasonable in relation to the effort expended, and the other milestones in the arrangement and the related risk associated with the achievement of the milestone and any ongoing research and development or other services are priced at fair value. Such payments that are contingent upon the achievement of a substantive milestone are recognized entirely as revenue in the period in which the milestone is achieved. To the extent that non-substantive milestones are achieved and we have remaining performance obligations, milestones are deferred and recognized as revenue over the estimated remaining period of performance. If there were no remaining performance obligations, we recognize the revenue in the period it is earned.

Accrued Research and Development Costs

We record accrued expenses for estimated costs of our research and development activities conducted by third-party service providers, which include the conduct of preclinical studies and clinical trials and contract manufacturing activities. We record the estimated costs of research and development activities based upon the estimated amount of services provided but not yet invoiced, and we include these costs in accrued liabilities in the consolidated balance sheets and within research and development expense in the statement of operations and comprehensive loss. These costs are a significant component of our research and development expenses. We record accrued expenses for these costs based on the estimated amount of work completed and in accordance with agreements established with these third parties.

We estimate the amount of work completed through discussions with internal personnel and external service providers as to the progress or stage of completion of the services and the agreed-upon fee to be paid for such services. We make significant judgments and estimates in determining the accrued balance in each reporting period. As actual costs become known, we adjust our accrued estimates. Although we do not expect our estimates to be materially different from amounts actually incurred, our understanding of the status and timing of services performed, the number of patients enrolled and the rate of patient enrollment may vary from our estimates and could result in us reporting amounts that are too high or too low in any particular period. Our accrued expenses are dependent, in part, upon the receipt of timely and accurate reporting from clinical research organizations and other third-party service providers. To date, there have been no material differences from our accrued expenses to actual expenses.

Stock-Based Compensation

We recognize compensation costs related to stock options granted to employees and directors based on the estimated fair value of the awards on the date of grant, net of estimated forfeitures. We estimate the grant date

fair value using the Black-Scholes option-pricing model. The grant date fair value of the stock-based awards is generally recognized on a straight-line basis over the requisite service period, which is generally the vesting period of the respective awards.

We recorded stock-based compensation expense related to options granted of $0.4 million and $0.6 million in each of the years ended December 31, 2013 and 2014, respectively.

In determining the fair value of the stock-based awards, we use the Black-Scholes option-pricing model and assumptions discussed below. Each of these inputs is subjective and generally requires significant judgment to determine.

Expected Term. The expected term represents the period that stock-based awards are expected to be outstanding. We used the simplified method to determine the expected term, which is calculated as the mid-point between the vesting date and the end of the contractual term of the options.

Expected Volatility. Since we are not yet a public company and do not have any trading history for our common stock, the expected volatility was estimated based on the average historical volatilities of common stock of comparable publicly traded entities over a period equal to the expected term of the stock option grants. The comparable companies were chosen based on their similar size, stage in the life cycle or area of specialty. We will continue to apply this process until a sufficient amount of historical information regarding the volatility of our own stock price becomes available.

Risk-Free Interest Rate. The risk-free interest rate is based on the U.S. Treasury zero coupon issues in effect at the time of grant for periods corresponding with the expected term of the option.

Expected Dividend. We have never paid dividends on our common stock and have no plans to pay dividends on our common stock. Therefore, we used an expected dividend yield of zero.

In addition to the Black-Scholes assumptions, we estimate our forfeiture rate based on an analysis of our actual forfeitures and will continue to evaluate the adequacy of the forfeiture rate based on actual forfeiture experience, analysis of employee turnover behavior and other factors. The impact from any forfeiture rate adjustment would be recognized in full in the period of adjustment, and if the actual number of future forfeitures differs from our estimates, we might be required to record adjustments to stock-based compensation in future periods.

Historically, for all periods prior to this offering, the fair value of the shares of common stock underlying our share-based awards were estimated on each grant date by our board of directors. In order to determine the fair value of our common stock underlying option grants, our board of directors considered, among other things, contemporaneous valuations of our common stock prepared by an unrelated third-party valuation firm at February 28, 2013, March 31, 2014, June 30, 2014, September 30, 2014 and December 31, 2014 in accordance with the guidance provide by the American Institute of Certified Public Accountants Practice Guide, Valuation of Privately-Held-Company Equity Securities Issued as Compensation. Given the absence of a public trading market for our common stock, our board of directors exercised reasonable judgment and considered a number of objective and subjective factors to determine the best estimate of the fair value of our common stock, including our stage of development; progress of our research and development efforts; the rights, preferences and privileges of our preferred stock relative to those of our common stock; equity market conditions affecting comparable public companies and the lack of marketability of our common stock.

The unrelated third-party valuations were prepared using the discounted cash flow approach to estimate our aggregate enterprise value at each valuation date. To arrive at the estimated fair value of our common stock, the enterprise value was allocated across our classes and series of capital stock using the Probability Weighted Expected Return Method, or PWERM, or Option Pricing Method, or OPM. The PWERM is a scenario-based analysis that estimates the value per share of common stock based on the probability-weighted present value of

expected future equity values for the common stock, under various possible future liquidity event scenarios, including initial public offering, sale of the company, dissolution and staying private. The OPM values each equity class by creating a series of call options on the equity value, with exercise prices based on the liquidation preferences, participation rights and strike prices of derivatives.

After the completion of this offering, our board of directors will determine the fair value of each share of underlying common stock based on the closing price of our common stock as reported on the date of grant.

The intrinsic value of all outstanding options at December 31, 2014 was $85.0 million based on an assumed initial public offering price of $15.00 per share, the midpoint of the price range set forth on the cover page of this prospectus.

Estimated Fair Value of Convertible Preferred Stock Warrants and Common Stock Warrants

Warrants for shares that are contingently redeemable, such as our convertible preferred stock, and common stock warrants subject to performance conditions that may result in the issuance of a variable number of shares are accounted for as freestanding financial instruments. These warrants are classified as liabilities on our consolidated balance sheets and are recorded at their estimated fair value. At the end of each reporting period, changes in the estimated fair value during the period are recorded as a component of other income (expense), net. We will continue to adjust these liabilities for changes in fair value until the earlier of the conversion to common stock warrants, performance conditions met, expiration or the exercise of the warrants.

We estimate the fair values of our convertible preferred stock warrants and common stock warrants using an option pricing model based on inputs as of the valuation measurement dates, including the fair values of our convertible preferred stock and common stock, the estimated volatility of the price of our convertible preferred stock and common stock, the expected term of the warrants and the risk-free interest rates.

Estimated Fair Value of Preferred Stock Derivative Liability

We have determined that our obligation to issue and our investor's obligation to purchase additional shares of convertible preferred stock represented a freestanding financial instrument, which we accounted for as a liability. The freestanding convertible preferred stock derivative liability was initially recorded at fair value, with fair value changes recognized at each balance sheet date as increases or decreases to other income (expense), net in the statement of operations and comprehensive loss. At the time of the exercise of the option, we remeasured the obligation to fair value with the change recognized in other income (expense), net on the consolidated statements of operations and comprehensive loss. The remaining value of the option subsequent to remeasurement was recorded as a capital transaction.

Income Taxes

We recognize deferred income taxes for temporary differences between the basis of assets and liabilities for financial statement and income tax purposes. We periodically evaluate the positive and negative evidence bearing upon realizability of our deferred tax assets. Based upon the weight of available evidence, which includes our historical operating performance, reported cumulative net losses since inception and difficulty in accurately forecasting our future results, we maintained a full valuation allowance on the net deferred tax assets. We intend to maintain a full valuation allowance on the federal and state deferred tax assets until sufficient positive evidence exists to support reversal of the valuation allowance.

At December 31, 2014, we generated net operating loss, or NOL, carryforwards (before tax effects) for federal and state income tax purposes of $51.2 million and $6.0 million, respectively. These federal and state NOL carryforwards will begin to expire in 2027 and 2017, respectively, if not utilized. In addition, we generated federal and state research and development tax credit carryforwards of $0.3 million and $0.9 million,

respectively, to offset future income tax liabilities. The federal research and development tax credits can be carried forward for 20 years and will start to expire in 2034, if not utilized, while the state research and development tax credits can be carried forward indefinitely. Under Section 382 of the Internal Revenue Code of 1986, as amended, or the Code, our ability to utilize NOL carryforwards or other tax attributes, such as research tax credits, in any taxable year may be limited if we have experienced an "ownership change." We performed a Section 382 analysis and believe that we experienced multiple ownership changes under Section 382 of the Code and as a result our federal and state NOLs and tax credits are subject to limitation.

We record unrecognized tax benefits as liabilities and adjust these liabilities when our judgment changes as a result of the evaluation of new information not previously available. Because of the complexity of some of these uncertainties, the ultimate resolution may result in a payment that is materially different from our current estimate of the unrecognized tax benefit liabilities. These differences will be reflected as increases or decreases to income tax expense in the period in which new information is available.

Contractual Obligations and Other Commitments

The following table summarizes our contractual obligations at December 31, 2014:

	Payments due by period				
	Less than 1 year	1 to 3 years	3 to 5 years	More than 5 years	Total
			(in thousands)		
Operating leases	$ 392	$ 261	$ —	$ —	$653
Total contractual obligations	$ 392	$ 261	$ —	$ —	$653

We enter into agreements in the normal course of business with contract research organizations for clinical trials and with vendors for preclinical studies and other services and products for operating purposes which are cancelable at any time by us, generally upon 30 days prior written notice. These payments are not included in this table of contractual obligations.

We are obligated to make future payments to third parties under in-license agreements, including sublicense fees, royalties and payments that become due and payable on the achievement of certain development and commercialization milestones. As the amount and timing of sublicense fees and the achievement and timing of these milestones are not probable and estimable, such commitments have not been included on our consolidated balance sheets or in the contractual obligations table above.

Off-Balance Sheet Arrangements

We have not entered into any off-balance sheet arrangements and do not have variable interests in variable interest entities.

Quantitative and Qualitative Disclosures about Market Risk

At December 31, 2014, we had cash and cash equivalents of $119.5 million, which consisted primarily of bank deposits. Such interest-earning instruments carry a degree of interest rate risk; however, historical fluctuations of interest income have not been significant.

We have not been exposed nor do we anticipate being exposed to material risks due to changes in interest rates. A hypothetical 10% change in interest rates during any of the periods presented would not have had a material impact on our consolidated financial statements.

JOBS Act Accounting Election

We are an "emerging growth company," as defined in the JOBS Act of 2012. Under the JOBS Act, emerging growth companies can delay adopting new or revised accounting standards issued subsequent to the enactment of the JOBS Act until such time as those standards apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards, and, therefore, will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board, or FASB, issued Accounting Standards Update, or ASU, 2014-09 (Accounting Standards Codification Topic, or ASC, 606), *Revenue from Contracts with Customers*. ASU 2014-09 affects any entity that either enters into contracts with customers to transfer goods and services or enters into contracts for the transfer of nonfinancial assets. ASU 2014-09 will replace most existing revenue recognition guidance when it becomes effective. The standard's core principle is that a company will recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods or services. In doing so, companies will need to use more judgment and make more estimates than under the currently effective guidance. These may include identifying performance obligations in the contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each separate performance obligation. ASU 2014-09 is effective for annual periods beginning after December 15, 2016, including interim periods within that period. Early adoption is not permitted. We are currently evaluating the impact of this guidance on our consolidated financial statements.

In June 2014, the FASB issued ASU 2014-10, *Development Stage Entities (Topic 915): Elimination of Certain Financial Reporting Requirements, Including an Amendment to Variable Interest Entities Guidance in Topic 810, Consolidation.* ASU 2014-10 simplifies the accounting guidance by removing all incremental financial reporting requirements for development stage entities. The amendments related to the elimination of the inception-to-date information and other disclosure requirements of Topic 915 should be applied retrospectively and are effective for annual reporting periods beginning after December 15, 2014 and interim periods therein. The Company has elected to early adopt this guidance and, accordingly, there is no inception to date information presented in these consolidated financial statements.

In August 2014, the FASB issued ASU 2014-15, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern*. ASU 2014-15 requires management to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern and to provide related footnote disclosures. In doing so, companies will have reduced diversity in the timing and content of footnote disclosures than under today's guidance. ASU 2014-15 is effective for the first quarter of 2016 with early adoption permitted. We do not believe the impact of adopting ASU 2014-15 on our consolidated financial statements will be material.

BUSINESS

Overview

We are a clinical-stage immuno-oncology company focused on the development of first-in-class technology platforms designed to stimulate robust and durable immune responses against cancer, and our lead product candidate is in a randomized controlled Phase 2b clinical trial in metastatic pancreatic cancer. Immuno-oncology encompasses a class of therapies that leverage the patient's immune system to slow the growth and spread of, or eliminate, tumor cells. We believe a critical distinguishing factor in our approach to immuno-oncology is that our novel therapies initiate powerful innate immune responses and drive targeted, durable adaptive immune responses. Another key attribute of our approach to immuno-oncology is the versatility of our technology platforms to generate customized and combinable therapies to target a wide range of cancers. Our pipeline of immuno-oncology product candidates is derived from two proprietary technology platforms: Live, Attenuated, Double-Deleted, or LADD, *Listeria monocytogenes* and cyclic dinucleotides, or CDNs. Our lead LADD product candidate, CRS-207, is currently being developed in metastatic pancreatic cancer and unresectable malignant pleural mesothelioma. In a completed randomized controlled Phase 2a clinical trial in metastatic pancreatic cancer patients, CRS-207 demonstrated a statistically significant improvement in overall survival when combined with GVAX Pancreas, a cellular vaccine product candidate. The 93-patient two-arm Phase 2a clinical trial was designed to compare the combination of CRS-207 and GVAX Pancreas versus GVAX Pancreas alone. The trial met the primary efficacy endpoint of overall survival at an interim analysis and was stopped upon recommendation from the Data Monitoring Committee. Based on the data from this study, our lead immuno-oncology regimen of CRS-207 and GVAX Pancreas was granted Breakthrough Therapy designation by the U.S. Food and Drug Administration, or FDA. Breakthrough Therapy designation is intended to expedite the development and review of products that treat serious or life-threatening conditions. We have obtained orphan drug designations from the FDA for CRS-207 and GVAX Pancreas for the treatment of pancreatic cancer and for CRS-207 for the treatment of mesothelioma. Under the Orphan Drug Act, the FDA may grant orphan drug designation to a drug or biologic intended to treat a rare disease or condition. Orphan drug designation entitles a party to certain financial incentives and can provide limited market exclusivity in certain circumstances. We are developing a pipeline of proprietary product candidates, including two product candidates in collaboration with Janssen Biotech, Inc., or Janssen, targeting prostate and lung cancers. In addition, we established a worldwide collaboration with Novartis Pharmaceuticals Corporation, or Novatis, for CDN product candidates in oncology. We have intellectual property protection on both of our technology platforms and each of our product candidates, which we believe we will maintain into the 2030s.

Despite recent advances in the treatment of cancer over the past few decades, cancer remains the second leading cause of death in the United States and cancer treatment represents a major unmet medical need. Immuno-oncology is an emerging field of cancer therapy that aims to activate the immune system in the tumor microenvironment to create and enhance anti-tumor immune responses, as well as to overcome the immuno-suppressive mechanisms that cancer cells have developed against the immune system. Recent developments in the field of immuno-oncology, including checkpoint inhibitors—therapies that have mechanisms focused on unmasking hidden cancer cells—have shown the potential to provide dramatic efficacy responses and extended survival, even in cancers where conventional therapies such as surgery, chemotherapy and radiotherapy have failed. Based on these advancements, immuno-oncology is becoming a new frontier for cancer drug development, and we believe it is one of the most promising areas of research and development within the pharmaceutical industry.

Both of our technology platforms, LADD and CDN, are designed to activate and stimulate a patient's immune system to specifically target cancer cells. Our LADD technology platform is based on a naturally pathogenic bacterium, *Listeria monocytogenes*, which induces a strong innate immune response. In order to engineer this bacterium for therapeutic use, we modify the *Listeria* with two proprietary gene deletions, substantially reducing its natural disease-causing properties. We then engineer specific LADD product candidates to express and secrete tumor antigens that stimulate the adaptive immune system to mount a powerful cellular attack on tumors. The intended effect is to prime and enhance the innate and adaptive immune responses and deliver an antigen-specific T cell attack against the target tumor cells. Our proprietary CDN technology platform comprises synthetic small molecule immune modulators that target and activate Stimulator of Interferon Genes, or STING,

receptors that are generally expressed at high levels in immune cells. Once activated, STING receptors prime and enhance the innate immune response by signaling through multiple distinct pathways. These signals activate the expression of a broad profile of cytokines that initiate the development of an effective adaptive immune response. Recent advancements reported in numerous leading scientific journals have created interest in the potential for STING receptor-targeting drug candidates for a broad range of therapeutic applications.

Our pipeline of product candidates has the potential to be applicable to a variety of cancers and to be combinable with many conventional and emerging cancer therapies, including cellular vaccines, chemotherapy, radiotherapy and checkpoint inhibitors, among others. Our most advanced immuno-oncology regimen, currently in a Phase 2b clinical trial known as ECLIPSE, assesses the combination of our lead LADD product candidate, CRS-207, with GVAX Pancreas, to treat late-stage metastatic pancreatic cancer patients who have received at least one prior line of therapy. GVAX Pancreas is a potentially synergistic combination candidate that is designed to induce T cells against an array of pancreatic cancer antigens to enable a broad-based immune response and has demonstrated a favorable safety profile in clinical trial to date. We expect to report top line results from ECLIPSE in the first half of 2016. In addition, we are evaluating CRS-207 in combination with chemotherapy in unresectable malignant pleural mesothelioma and have a planned study of CRS-207 in combination with GVAX Pancreas and an anti-PD-1 checkpoint inhibitor in metastatic pancreatic cancer. We also have ongoing and planned clinical development programs evaluating LADD regimens for glioblastoma multiforme and ovarian cancer, and with Janssen in lung and prostate cancers.

We also envision multiple product opportunities for the CDN technology platform. Because STING receptors are known to be critical for immune surveillance and control of cancer progression, we believe that STING receptors represent an attractive target for novel drug candidates. We are developing CDN product candidates as impactful therapies that are intended to prime and enhance the innate and adaptive immune responses, and we have entered into a worldwide collaboration with Novartis for CDN product candidates in oncology. Based on their mechanism of action, our CDN product candidates may also have synergistic or additive benefits when combined with other cancer therapies.

Our vision is to leverage our scientific expertise and understanding of the body's natural defense systems, including the interplay between the innate and adaptive immune responses, to develop safe and effective therapies for the benefit of patients.

Our Proprietary Technology Platforms

We have developed first-in-class technology platforms, LADD and CDN, to prime and enhance immune responses to cancer in indications with significant unmet medical need. We believe our technology platforms represent innovative approaches in immuno-oncology that leverage the potential of the patient's immune system to initiate a powerful innate immune response and to drive a targeted and durable adaptive immune response against cancer.

***Live, Attenuated, Double-Deleted* Listeria Monocytogenes**

Our proprietary LADD product candidates have been engineered for safety and optimal efficacy. We seek to optimize tumor-specific immune responses by engineering our LADD product candidates to express encoded tumor-specific antigens and deliver them to antigen-presenting cells, which include dendritic cells, or DCs, lead to efficient priming of a class of immune cells known as T cells. Once primed, these T cells seek out and eliminate the targeted tumor cells. Our LADD product candidates have been engineered for safety in humans through the deletion of two genes critical for virulence of unmodified *Listeria*: *actA* and *inlB*. The deletion of the *actA* gene prevents the spread of our LADD product candidates from cell to cell, which controls the spread of infection. The deletion of the *inlB* gene prevents the infection of hepatocytes, or liver cells, which can lead to toxicity. We believe key attributes of our LADD technology platform include:

- *Early Evidence of Efficacy.* Our randomized controlled Phase 2a clinical trial in patients with metastatic pancreatic cancer who had received or refused prior therapy demonstrated improved overall survival.

- *Novel Mechanism.* Our LADD product candidates are designed to initiate a powerful innate immune response and drive a targeted, durable adaptive immune response.

- *Early Evidence of Safety in Preclinical Studies and Clinical Trials.* Through our proprietary deletion of two genes that contribute to *Listeria*'s virulence, we substantially reduce the natural disease-causing properties of *Listeria*, creating stable product candidates suitable for therapeutic use.

- *Versatility.* Individual LADD product candidates can be engineered to target a wide range of cancers by promoting anti-tumor immune responses against antigens associated with specific tumors.

- *Combinability*. The mechanisms of action and safety profile of our LADD product candidates may give them the potential for combination with conventional and novel therapies, such as cellular vaccines, chemotherapy, radiotherapy and checkpoint inhibitors, among others.

- *Repeatable Administration.* Our LADD product candidates are not neutralized by the patient's immune system and are designed for repeat administration, thus allowing a chronic therapy for a sustained tumor antigen-specific response.

- *Cost-effectiveness.* Our LADD product candidates are not personalized for each patient and can be manufactured through a relatively simple and cost-effective fermentation process.

We have engineered and developed proprietary LADD product candidates that are currently under evaluation in clinical trials in metastatic pancreatic cancer, unresectable malignant pleural mesothelioma and glioblastoma multiforme. Further, we are planning additional clinical development programs in indications with significant unmet medical need, such as ovarian, lung and prostate cancers. For large or complex indications, we are pursuing collaborations on a product-by-product basis. As part of this strategy, in May 2014 we entered into a collaboration with Janssen for the development of a LADD product candidate for prostate cancer. Subsequently, we entered into a second collaboration with Janssen for the development of a LADD product candidate for lung cancer, and this agreement became effective in November 2014. In July 2014, our lead immuno-oncology regimen of CRS-207 combined with GVAX Pancreas was granted Breakthrough Therapy designation by the FDA based on Phase 2a clinical trial results that showed a statistically significant improvement in overall survival in patients with metastatic pancreatic cancer who had received or refused prior therapy.

Cyclic Dinucleotides

Our proprietary CDN product candidates are synthetic small molecule immune modulators that are designed to target and activate a receptor known as the STING receptor. Once activated, the STING receptor initiates a profound innate immune response by signaling through three distinct pathways, inducing the expression of a broad profile of cytokines that activate the development of an effective tumor antigen-specific T cell adaptive immune response. The STING receptor is generally expressed at high levels in the cytosol of immune cells, including DCs. Recent advancements reported in numerous leading scientific journals have created interest in the potential for STING receptor-targeting drug candidates across diverse applications. We believe the STING receptor represents an attractive target for novel drug candidates because it is known to be critical for immune surveillance and control of cancer progression. We are developing CDN product candidates as therapies that are intended to prime and enhance the innate and adaptive immune response, and we have entered into a worldwide collaboration agreement with Novartis for CDN product candidates in oncology. Our proprietary synthetic CDN product candidates are significantly more potent than naturally occurring CDN molecules, indicating high translational potential as a therapeutic approach to elicit an effective immune response. We believe key attributes of our CDN technology platform are:

- *Early Evidence of Potency.* Our CDN product candidates have demonstrated significant anti-tumor activity in pre-clinical studies.

- *Novel Mechanism.* Our CDN product candidates are designed to initiate broad and strong innate and adaptive immune responses through the activation of the STING receptor signaling pathway.

- *Versatility of Delivery*. We believe our CDN product candidates can be effectively delivered via intratumoral, or IT, injection, systemic delivery via formulation and other novel modalities such as conjugation with antibodies.

- *Combinability*. Based on their mechanism of action, we believe our CDN product candidates may have synergistic or additive benefits of immune-mediated tumor killing mechanisms when combined with conventional and novel therapies such as cellular vaccines, chemotherapy, radiotherapy and checkpoint inhibitors, among others.

- *Ease of Manufacture*. Our CDN product candidates are small molecules manufactured through a relatively simple and cost-effective process.

- *Broad Applicability*. We believe our CDN product candidates will have broad application in oncology and the potential to expand into other therapeutic areas such as infectious and autoimmune diseases.

Our preclinical studies utilizing our synthetic CDN derivatives resulted in eradication of treated tumors and induction of systemic tumor-specific immunity in several aggressive preclinical tumor models. Based on the results of these preclinical studies, we believe our proprietary CDN derivatives are significantly more potent than natural stimulators of the STING receptor.

Key Advantages of the Aduro Approach

Immuno-oncology is an emerging field of cancer treatment that aims to directly activate the immune system in the tumor microenvironment to create and enhance anti-tumor immune responses, as well as to overcome the immuno-suppressive mechanisms that cancer cells have developed against the immune system. There are two general approaches to immuno-oncology: “create and expand” the anti-tumor immune response and “remove the brakes” placed on the immune response by the tumor’s defenses. By focusing on the “create and expand” approach, our technology platforms are designed to prime and enhance innate and tumor-specific adaptive immune responses against the target tumor cells.

We believe several advantages to our approach include:

- **Our product candidates are engineered to prime and enhance both the innate and adaptive immune responses against tumors.** We believe that leveraging both the innate and adaptive immune responses is a novel approach to immuno-oncology that differentiates our technology platforms from current and conventional therapies and has the potential to create best-in-class cancer therapies. Our LADD product candidates efficiently enter circulating APCs, priming and enhancing a potent innate immune response and an adaptive immune response to fight cancer. By stimulating the expression of a broad profile of cytokines, our CDN product candidates are designed to directly activate the tumor microenvironment and enhance recognition of the tumor by the immune system, leading to tumor destruction and long-lasting anti-tumoral immunological memory. This proprietary synthetic molecule is significantly more potent than naturally occurring CDN molecules and toll-like receptor, or TLR, agonists, indicating a high potential as a therapeutic approach against diverse tumor types.

- **By working to stimulate the patient’s immune system, our product candidates have the potential to be well-tolerated and safe, relative to many existing treatments.** Because our

therapies are designed to prime and enhance the body's natural innate and adaptive immune responses, we believe that our approach may offer a safer treatment alternative to conventional oncology approaches such as chemotherapy, radiotherapy and antibody therapies. To date, our LADD product candidates have been well-tolerated in the clinical setting.

- **Based on their mechanism of action and safety profiles, our therapies have the potential to be readily combinable and synergistic with both conventional and novel therapies.** Our most advanced regimen, currently in our Phase 2b ECLIPSE clinical trial, is an immuno-oncology regimen that assesses the combination of CRS-207, with GVAX Pancreas. In an earlier randomized controlled Phase 2a clinical trial, this combination regimen demonstrated a statistically significant overall survival benefit in patients with metastatic pancreatic cancer who had received or refused prior therapy, when compared to patients receiving GVAX Pancreas alone. GVAX Pancreas is a potentially synergistic combination candidate that is designed to induce T cells against an array of pancreatic cancer antigens to enable a broad-based immune response with a well-established, favorable safety profile. We believe CRS-207 has further potential to enhance therapeutic outcomes when combined with other cancer treatments. CRS-207 is also under investigation for use in combination with chemotherapy in patients with unresectable malignant pleural mesothelioma who have not received prior therapy. In preclinical studies, we have shown that our proprietary CDN product candidates can be co-formulated with designated recombinant proteins to induce potent antigen-specific helper T cell, or CD4+ T cell, and cytotoxic T cell, or CD8+ T cell, immunity.

- **Our "create and expand" approach to immuno-oncology may have a role alongside other potentially complementary immuno-oncology therapies that have mechanisms focused on the "remove the brakes" approach, such as checkpoint inhibitors.** Many of the immuno-oncology therapies in development center on the "remove the brakes" approach, which works by overcoming immunosuppressive pathways that mask a tumor from the body's immune system. Some of the most advanced technologies are anti-PD-1/PD-L1 monoclonal antibodies, a class of checkpoint inhibitors that target these immunosuppressive pathways. By impairing the interaction of the inhibitory receptor PD-1 on T cells, which we refer to as "removing the brakes," these checkpoint inhibitors strengthen the anti-tumor T cell response. We believe that our approach to "create and expand" the immune response will be synergistic to these "remove the brakes" approaches and allow our technology to play an important role in the overall immuno-oncology treatment paradigm.

- **Our versatile LADD and CDN technology platforms have produced a deep pipeline and have the potential to produce a breadth of future development opportunities.** Our lead LADD product candidate, CRS-207, is engineered to stimulate a response to mesothelin, an antigen expressed by multiple tumor types. Thus, our ongoing clinical trials involving CRS-207 are focused on assessing CRS-207 for the treatment of mesothelin-based tumors in metastatic pancreatic cancer and unresectable malignant pleural mesothelioma. We anticipate conducting additional studies of CRS-207 in other tumor types that express high levels of mesothelin. We have developed other proprietary LADD product candidates to target prostate cancer, lung cancer and glioblastoma multiforme and intend to explore the development of additional LADD product candidates to target other cancers. With our CDN technology program, we are exploring various delivery methods and formulations, as well as the potential to expand their application into other disease areas beyond oncology. In addition, we have entered into a worldwide collaboration with Novatis for CDN product candidates in oncology.

Our Strategy

Our current focus is to develop and commercialize best-in-class cancer therapies using our LADD and CDN technology platforms. Key elements of our strategy include:

- **Rapidly advance CRS-207 through clinical development and regulatory approval.** We are currently conducting our Phase 2b ECLIPSE clinical trial of CRS-207 in combination with GVAX

Pancreas in patients with metastatic pancreatic cancer who have received at least one prior line of therapy. We expect to complete enrollment in the third quarter of 2015 and to report top line results in the first half of 2016. Assuming positive clinical results in pancreatic cancer studies, we plan to seek regulatory approval of CRS-207 in the United States, Europe and other major geographies around the world.

- **Maximize the commercial value of our proprietary LADD and CDN technology platforms.** We currently have global development, marketing and commercialization rights for our lead product candidate, CRS-207, as well as additional LADD product candidates. If we obtain regulatory approvals for CRS-207 in pancreatic cancer or other indications, we plan to build a commercial organization with a specialty sales force to market CRS-207. We also plan to retain commercial rights to additional LADD product candidates. In addition, we established a worldwide collaboration with Novartis for CDN product candidates in oncology. We also maintain worldwide rights to our CDN technology platform outside of oncology.

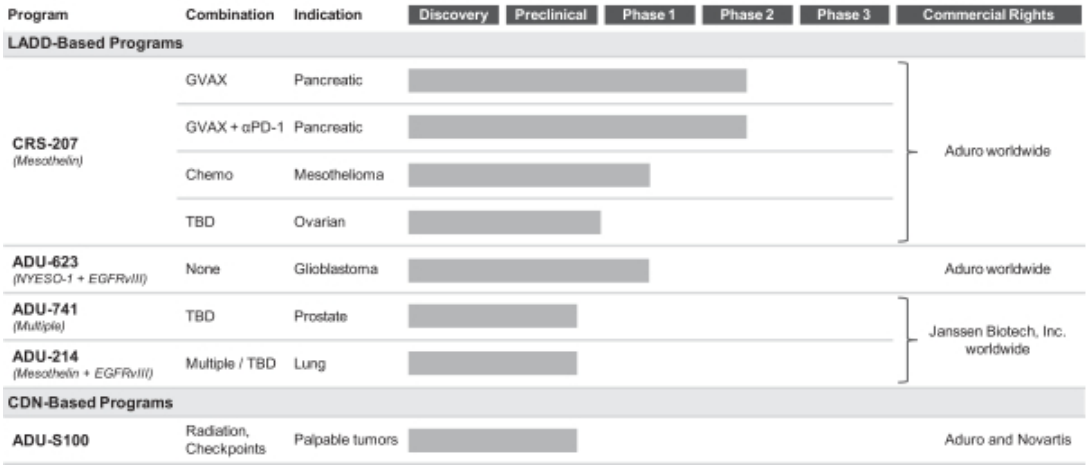
- **Develop novel drug candidates by leveraging our proprietary technology platforms and our understanding of combination therapy in immuno-oncology.** We have proprietary technology platforms that we believe can generate novel and combinable therapies to target a wide range of cancers with significant unmet medical need. We plan to invest in these technology platforms to develop additional product candidates, and our current and future pipeline may be applicable to various tumor types due to the current efficacy data, safety profiles and combination potential of our current product candidates. We intend to further explore combination opportunities with conventional and novel treatments, including cellular vaccines, chemotherapy, radiotherapy and checkpoint inhibitors, among others.

- **Expand on the value of our product candidates through collaborations.** We may decide to selectively partner large and complex oncology indications, in certain geographies and where we believe a partner could bring additional resources and expertise to maximize the value of our product candidates. We entered into two strategic collaborations with Janssen for the treatment of prostate, lung and certain other cancers. We also established a worldwide development and commercialization collaboration with Novartis for CDN product candidates in oncology. We believe these collaborations have the potential to drive significant value through the extensive capabilities of these organizations.

- **Leverage the expertise of our scientific founders and key advisors to develop innovative technologies at the forefront of the immuno-oncology field.** Our scientific founders and advisors are from some of the world's leading research institutions and have a history of seminal discoveries and significant experience in oncology, immuno-oncology and vaccines. As such, we plan to continue to leverage the collective talent of our scientists, clinicians and a network of highly influential advisors to inform our development strategy and enable our technology to be at the forefront of the immuno-oncology field. We strive to protect our commercially important discoveries and product candidates by applying for, maintaining and defending our patent rights. At March 31, 2015, our owned U.S. patent portfolio consisted of 21 issued patents and 14 pending patent applications.

Our Pipeline

Our pipeline of product candidates is depicted in the following chart:



Immuno-oncology and the Application of Our Technology Platform

Background on Immuno-Oncology

Cancer is a broad group of diseases in which cells divide and grow in an uncontrolled fashion, and spread via the bloodstream. In normal tissues, the rates of new cell growth and cell death are tightly regulated and kept in balance. In cancerous tissues, this balance is disrupted as a result of mutations, causing unregulated cell growth that leads to tumor formation. The immune system is designed to identify and eliminate tumor cells expressing foreign or abnormal antigens, although this process is often defective in cancer patients.

The immune system is generally divided into two subsystems: the innate immune system and the adaptive immune system. The innate immune system is the body's first line of immune defense and is non-specific, providing an immediate response to foreign bodies, including tumor antigens. The adaptive immune system provides a specific and long-lasting immune response against these threats. Within the innate immune system, natural killer cells, or NK cells, cytokines and APCs, such as DCs, are involved in tumor detection and destruction. NK cells can detect foreign or transformed cells, which no longer function normally, and cause them to self-eliminate through a process called apoptosis or programmed cell death. Cytokines can stimulate a broad-based immune response against cancer cells through multiple modalities, including activating T cells and causing them to proliferate. DCs act as messengers between the innate and the adaptive immune systems, by sampling the resulting fragments of destroyed cells. The DCs process foreign antigens, and present them on the cell surface to be recognized by T cells. T cells are a central component of the adaptive immune system. Within the T cell population, CD8+ T cells recognize and destroy cells expressing foreign antigens, whereas CD4+ T cells recognize foreign antigens and assist in the immune response. These cells can specifically target tumors based on antigen-specificity and further promote tumor destruction. Specificity, training T cells to recognize a specific antigen, and immunological memory, providing long-lasting protection against an antigen, are the two most important components of the adaptive immune system in fighting cancers.

In cancer, the immune system's natural strength has been diminished leading to a reduced capability to eradicate tumor cells. Immuno-oncology is an emerging field of cancer treatment that aims to activate the immune system in the tumor microenvironment to create and enhance anti-tumor immune responses, as well as to overcome the immuno-suppressive mechanisms that cancer cells have developed against the immune system. Recent developments in the field of immuno-oncology have shown the potential to provide dramatic efficacy

responses and extended survival, even in cancers where conventional therapies such as surgery, chemotherapy and radiotherapy have failed.

There are two general approaches to immuno-oncology: “creating and expanding” anti-tumor immune responses and “removing the brakes,” or overcoming the immuno-suppressive mechanisms that cancer cells have developed against the immune system.

Creating and Expanding

The “create and expand” approach to immuno-oncology involves harnessing the patient’s immune system to identify and eradicate cancer cells. There have been many modalities within this approach, some of which have shown early promise, yet these individual approaches have inherent limitations in efficacy, safety or commercial viability. Some of these approaches and their potential limitations are as follows:

- *Cellular Vaccines*: In this approach, irradiated human cancer cells, which are genetically modified to express immune system-stimulating cytokines, such as GM-CSF, to help stimulate the immune system, are administered to patients to recruit and activate DCs. These whole cancer cells contain the full spectrum of antigens expressed by a particular cancer cell line, thus allowing for antigen-specific T cell priming to numerous relevant antigens. Cellular vaccines have demonstrated the potential to generate both CD4+ and CD8+ T cell responses against tumor cells, though completed clinical trials to date have shown limitations in their effectiveness as a monotherapy.

- *Engineered CD8+ T Cells*: In this approach, T cells are engineered outside of the body incorporating chimeric antigen receptors, or CARs, or T cell receptors, or TCRs, directed against specific tumor antigens. Following ex-vivo proliferation, CAR-T cells and TCR-T cells are infused back into the patient. Several engineered CD8+ T cell therapies have shown promising clinical results, yet these personalized therapies may have challenges with commercial-scale manufacturing and broad distribution.

- *Ex-Vivo Modulated Cancer Vaccines*: In this approach, inactive APCs are isolated and removed from the body, then activated in a laboratory. Post-activation, the cells are administered to the patient with the aim of stimulating the tumor microenvironment into mounting a response against the cancer cells. This personalized approach has resulted in one approved product, sipuleucel-T, developed by Dendreon Corporation, but has been hampered by cumbersome manufacturing and handling requirements.

- *Oncolytic Viral Vaccines*: In this approach, oncolytic viruses selectively lyse cancer cells causing an immune response through the release of tumor antigens. Though some promising results have been observed, efficacy as a monotherapy has been limited by inefficient delivery to tumors, balancing the optimal viral replication profile, and a limited ability to grow the induced immune response beyond the initial treatment site.

- *Peptide Vaccines:* In this approach, partial or full tumor antigens are administered with a second agent called an immune adjuvant. Most cancer vaccine clinical trials have been performed with peptide vaccines. Clinical outcomes using this approach have been disappointing, in part because this treatment mechanism has been shown to stimulate CD4+ T cells and other regulatory T cells, but not the CD8+ T cells that are necessary to kill cancer cells.

- *Vector-based Vaccines:* In this approach, vector-based vaccines deliver tumor antigens to APCs in their genomic form through bacterial and viral vectors. We believe that this may be the most powerful method to generate a strong adaptive immune response against tumor cells. However, previously studied vector-based vaccines have had significant limitations due to their virulence and the effects of neutralizing antibodies, among other factors.

Removing the Brakes

The “remove the brakes” approach to immuno-oncology is based on the premise of unmasking hidden cancer cells that have developed escape mechanisms to evade the immune system. The primary modality to this approach is classified within the category of checkpoint inhibitors. These therapies have demonstrated significant promise to treat a broad range of tumor types, yet they are not effective in many cancers. We believe our approach could be complementary to checkpoint inhibitors making them more effective in a broader range of cancers.

Checkpoint inhibitors are aimed at overcoming the defenses that tumor cells have developed against the immune system. Anti-CTLA-4 and anti-PD-1 are checkpoint inhibitors that have been studied in clinical trials for cancer. We believe that the efficacy of this approach as a monotherapy depends on the pre-existence of a T cell response against the tumor cells. Some patients’ immune systems are unable to recognize the tumor and therefore cannot generate the necessary immune response to eliminate the tumor following treatment with checkpoint inhibitors. Multiple preclinical models have shown an amplified anti-tumor effect against poorly immunogenic tumors when checkpoint inhibitors are combined with strong adaptive immune cell stimulators, such as cancer vaccines.

The Aduro Approach to Immuno-Oncology

We believe that our LADD and CDN technology platforms represent a new, significant advancement within the field of immuno-oncology that can both overcome the limitations of other “create and expand” approaches and potentially complement emerging “remove the brakes” approaches to immuno-oncology. Our “create and expand” approach is designed to prime and enhance innate and adaptive immune responses against cancer cells. In addition, our LADD technology platform has the potential for combination with conventional and novel therapies, including other immuno-oncology products that modulate the immune response, including checkpoint inhibitors that “remove the brakes,” due to the mechanism of action and safety profile. Using our proprietary method of modifying *Listeria*, we engineer LADD product candidates which are designed to prime and enhance an innate and adaptive immune responses specific for several targets present on tumor cells. We have designed our LADD product candidates to directly address the safety concerns seen with other vector-based vaccines by deleting two genes critical for the virulence of unmodified *Listeria*. Our LADD product candidates are not neutralized by the patient’s immune system therefore allowing for repeat administration as a chronic therapy which has a sustained enhancing of tumor antigen-specific T cell immunity. Our CDN technology platform is designed to specifically activate the STING receptor. Once activated, the STING receptor initiates a profound innate immune response, causing the secretion of cytokines that enhance the adaptive immune response against tumor cells. Both our LADD and CDN technology platforms are intended to prime and enhance an innate and adaptive immune response specific for several targets present on tumor cells.

Our Immuno-Oncology Technology Platforms

LADD Technology Platform Overview

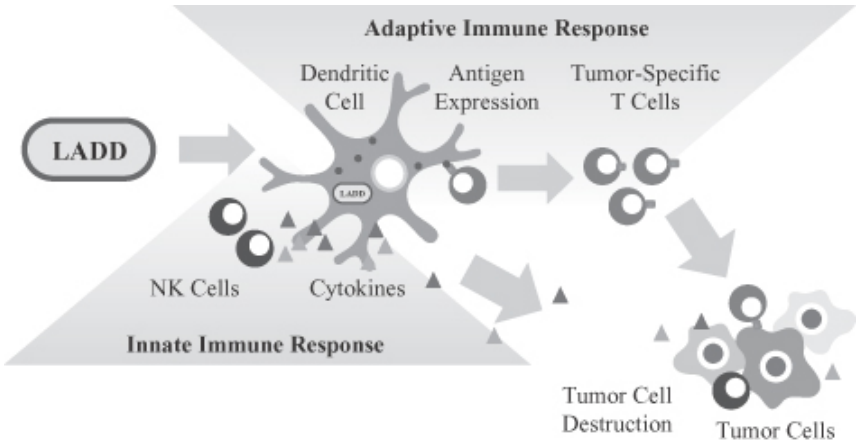
Listeria is a natural bacterium that has inherent characteristics to recruit and activate NK cells, triggering a strong and immediate innate immune response. Our LADD technology platform modifies *Listeria* in two ways: (1) to exclude two harmful genes required for the virulence of the unmodified organism and (2) to express and secrete tumor antigens which prime and enhance an adaptive immune response, a T cell attack specifically against tumor cells.

There are a number of desirable features of the natural biology of *Listeria* that make it an attractive platform for immuno-oncology drug development, in particular is its ability to induce strong innate and adaptive immune responses by effective stimulation of CD4+ and CD8+ T cell immunity. There are also practical features of *Listeria*-based vaccines, including that they are not neutralized by the patient’s immune system, are designed

for repeat administration and can be manufactured through a relatively simple and cost-effective fermentation process. We believe we have developed a LADD technology platform that is safe yet retains the potency of the natural, or unmodified, bacteria.

We designed our LADD technology platform to enable the safe administration of *Listeria* by deleting two genes critical to the bacterium's natural virulence, *actA* and *inlB*, which are required for the spread from one cell to another and the infection of hepatocytes, respectively. Our method of attenuation results in the complete deletion of *actA* and *inlB* virulence genes, and as a result we believe there is no possibility for reversion to unmodified *Listeria*. The attenuated strain of bacteria is then modified with new genetic material to encode and express specific tumor antigens. Our method of antigen expression involves site-specific insertion of antigen expression cassettes in up to four locations on the chromosome of the attenuated platform strain.

Upon intravenous administration, our LADD product candidates initially target APCs, including DCs. DCs circulate in the blood stream and continuously monitor their environment for danger signals by sampling proteins known as antigens from dying tumor cells and pathogens such as *Listeria*. Activated DCs release cytokines and process the sampled antigens and present them on the cell surface to be recognized by T cells, thereby training the T cells to specifically target the presented antigens. In this way, DCs are the primary initiators of both the innate and adaptive immune responses and serve as messengers between the innate and adaptive immune systems, as illustrated in the figure below. Our LADD product candidates are designed to leverage the combined effect of broad-based innate immune responses and antigen-specific T cell responses to initiate destruction of tumor cells while sparing normal tissue.



LADD-Based Pipeline

Our LADD product candidates are developed in combination with complementary therapies to treat specific cancers. The current portfolio includes:

Program	Indication	Combination	Status
CRS-207 *(Mesothelin)*	Pancreatic	GVAX	Phase 2b / Ongoing
	Pancreatic	GVAX+ anti-PD-1	Phase 2b / Ongoing
	Mesothelioma	Chemo	Phase 1b / Ongoing
ADU-623 *(NYESO-1 + EGFRvIII)*	Glioblastoma	None	Phase 1 / Ongoing
ADU-741* *(Multiple)*	Prostate	TBD	Preclinical
ADU-214* *(Mesothelin + EGFRvIII)*	Lung	Multiple / TBD	Preclinical

* Programs under collaboration with Janssen.

The IND for CRS-207 for use in combination with GVAX Pancreas for pancreatic cancer was filed by Aduro in April 2011. The IND for CRS-207 in combination with GVAX Pancreas and nivolumab for pancreatic cancer was filed by The Johns Hopkins University, or JHU, in September 2014. The IND for CRS-207 for use in mesothelioma was filed by Cerus Corporation in June 2007.

The IND for ADU-623 for use in glioblastoma was filed by Providence Health & Services in August 2013.

We have not yet filed INDs for the two preclinical programs, ADU-741 for prostate cancer and ADU-214 for lung cancer.

CRS-207

CRS-207 is our lead LADD product candidate. CRS-207 is a monovalent LADD product candidate engineered to express the mesothelin antigen that is over-expressed on all pancreatic and mesothelioma tumors. Some studies have shown that mesothelin is over-expressed in the following additional cancer types: ovarian, gastric, lung, triple negative breast, esophageal and colorectal.

CRS-207 in Pancreatic Cancer

Pancreatic Cancer Overview

Pancreatic cancer is the fourth leading cause of cancer deaths in the United States. In 2012, the estimated incidence according to Globocan was 43,000 in the Untied States and 338,000 worldwide. Pancreatic cancer is aggressive and often not diagnosed until it is too advanced for current treatments to be effective. Most patients are diagnosed after the age of 45, and 94% of patients die within five years from diagnosis. The majority of pancreatic cancer patients are treated with chemotherapy, but this cancer is highly resistant to chemotherapy. Approximately 20% of the pancreatic cancer patients are treated with surgery; however, even for those with successful surgical resection, the median survival is approximately two years. Radiotherapy may be used for locally advanced tumors, but it is not curative. There are currently no approved treatments for second and third-line patients.

CRS-207 with GVAX Pancreas in Pancreatic Cancer

CRS-207 combined with GVAX Pancreas is our lead LADD regimen. We are currently conducting our Phase 2b ECLIPSE clinical trial of CRS-207 in combination with GVAX Pancreas in patients with metastatic pancreatic cancer who have received at least one prior line of therapy in the metastatic setting.

About GVAX and GVAX Pancreas

GVAX product candidates are a family of vaccines derived from human cancer cell lines that have been engineered to recruit the immune system. In 2013, we acquired the rights, title and interest of ANI Pharmaceuticals Inc. to GVAX Pancreas product candidates. These irradiated tumor cell lines are modified to express GM-CSF, the most potent DC recruitment factor. GVAX induces T cells against a broad array of cancer antigens. Low-dose cyclophosphamide is administered one day prior to GVAX Pancreas to inhibit regulatory T cells. GVAX Pancreas is derived from human pancreatic cancer cell lines and is designed to activate specific T cell immunity to cancer antigens including mesothelin enabling, or priming, a broad-based immune response.

Preclinical studies have shown the concept of synergy between immune checkpoint inhibitors such as anti-CTLA-4 antibodies and cancer vaccines such as GVAX. For example, researchers at JHU conducted a Phase 1b, open-label, randomized study to build on these preclinical observations by evaluating ipilimumab (a checkpoint inhibitor, anti-CTLA-4 antibody) alone or in combination with GVAX Pancreas for the treatment of previously treated, locally advanced, or metastatic pancreatic cancer. The primary objective of the study was to determine the safety profile. Secondary objectives included estimation of overall survival. A total of 30 patients with previously treated advanced pancreatic cancer were randomized (1:1). The median overall survival was 3.6 months for patients receiving ipilimumab, Arm 1, compared with 5.7 months for patients receiving ipilimumab in combination with GVAX Pancreas, Arm 2 (hazard ratio for death, or HR, = 0.51, p-value = 0.072). The one-year survival probability for patients in Arm 1 was 7% compared to 27% for patients in Arm 2. The hazard ratio is a measure of the risk of a particular event in one group compared to another group, over time. An HR lower than 1.00 indicates that the observed risk is lower in the treatment arm than in the control arm. A p-value is a measure of the statistical significance of the observed result. By convention, a p-value lower than 0.05 is considered statistically significant. Similar to prior ipilimumab studies, 20% of patients in each arm had grade 3/4 immune-related adverse events. The results of the study concluded that immune checkpoint blockade in combination with GVAX Pancreas has the potential for clinical benefit and should be evaluated further in a larger study.

Clinical Status

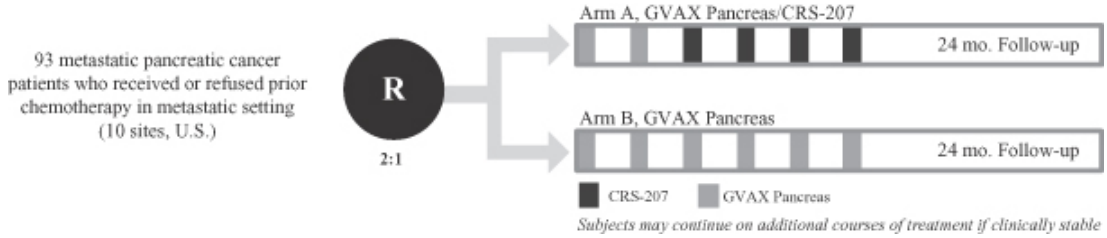
Our preclinical and Phase 1 clinical studies, conducted by Cerus Corporation in 2005-2006 and Anza Therapeutics in 2007-2009, demonstrated the potential of utilizing the heterologous priming and enhancing combination of CRS-207 and GVAX Pancreas. Based on these data, we initiated a randomized controlled Phase 2a clinical trial with this combination. The results of our randomized controlled Phase 2a clinical trial were first presented at the American Society of Clinical Oncology, or ASCO, in 2013 and published in the January 2015 issue of the Journal of Clinical Oncology and further supported this combination approach to treat metastatic pancreatic cancer.

In a randomized controlled Phase 2a clinical trial the combination of CRS-207 with GVAX Pancreas demonstrated a statistically significant improvement in overall survival compared to GVAX Pancreas alone in patients with metastatic pancreatic cancer who previously received or refused prior chemotherapy. Based on these data, the FDA granted Breakthrough Therapy designation to the combination of CRS-207 and GVAX Pancreas. We have also obtained orphan drug designations for both GVAX Pancreas and CRS-207 for pancreatic cancer. We designed our Phase 2b ECLIPSE clinical trial based on the results we observed in the Phase 2a clinical trial. The ECLIPSE clinical trial is being conducted to compare the clinical outcomes of the combination of CRS-207 and GVAX Pancreas to currently used single agent chemotherapies or to CRS-207 alone. We expect to complete enrollment in ECLIPSE in the third quarter of 2015 and to report top line results in the first half of 2016.

Phase 2a (Completed)

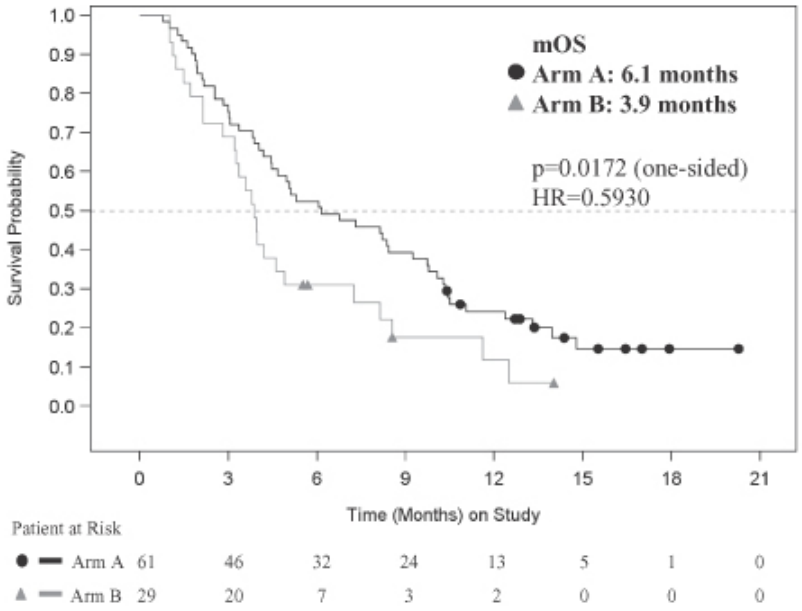
We conducted a randomized controlled Phase 2a clinical trial of CRS-207 in combination with GVAX Pancreas in patients with metastatic pancreatic cancer who received or refused prior therapy. The 93-patient two-arm study was designed to compare the combination of CRS-207 and GVAX Pancreas versus GVAX Pancreas alone. The trial met the primary efficacy endpoint of overall survival at an interim analysis and was stopped upon recommendation from the Data Monitoring Committee.

The trial enrolled advanced-stage metastatic pancreatic cancer patients, with most patients having received two or more prior therapies in the metastatic setting. Patients were randomized in a two to one ratio in Arm A, which received GVAX Pancreas vaccine followed by four doses of CRS-207, or Arm B, which received six doses of GVAX Pancreas vaccine alone. In each arm, low dose cyclophosphamide was administered one day prior to GVAX Pancreas in order to enhance its immunogenicity and anti-tumor activity. Low dose cyclophosphamide inhibits T regulatory cells, and T regulatory cells may diminish a vaccine's efficacy. Patients were allowed to receive additional treatment courses (a treatment course contains six vaccinations) if they were clinically stable and perceived by the investigator to benefit from treatment. In both arms, treatments are administered at three week intervals, with a four week interval between treatment courses. After a four-week rest, clinically stable patients were offered additional courses.



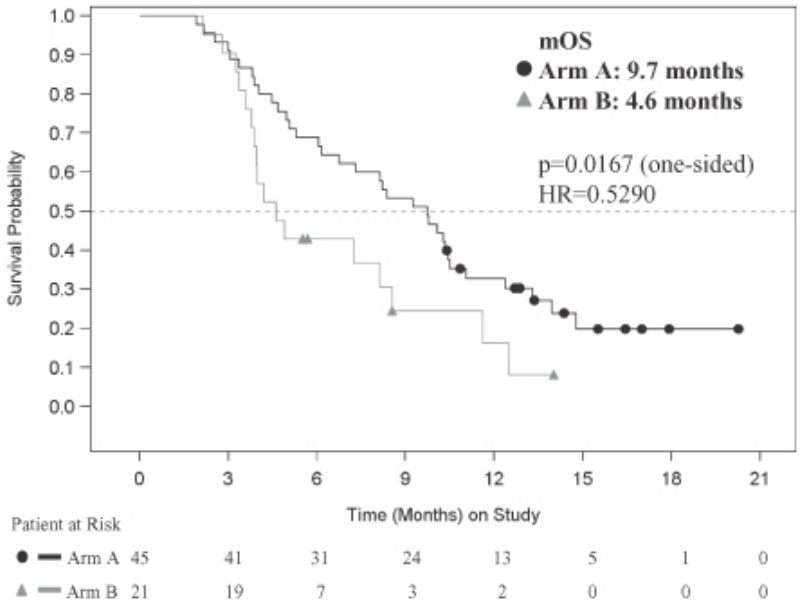
In January 2014, safety and efficacy data were presented at the ASCO Gastrointestinal Cancers Symposium. The study demonstrated a statistically significant survival benefit in patients receiving the combination of CRS-207 and GVAX Pancreas, Arm A, compared to GVAX Pancreas vaccine alone, Arm B. The median overall survival, or mOS, of the patients receiving the combination was 6.1 months compared to 3.9 months for those receiving GVAX Pancreas monotherapy (hazard ratio for death, or HR, = 0.59, one-sided p value = 0.0172). One-year survival probability for patients in Arm A was 24% compared with 12% for patients in Arm B. The Kaplan-Meier survival curve for the full analysis set, patients who received at least one treatment, as of October 2013 is shown below.

Phase 2a Overall Survival - Full Analysis Set



To better evaluate the effect of CRS-207, we performed a pre-defined subset analysis that included only patients who received at least three doses in either treatment group, GVAX Pancreas followed by at least one CRS-207 dose in Arm A or at least three doses of GVAX Pancreas in Arm B. In this subset of 45 Arm A patients and 21 Arm B patients, the mOS was 9.7 months in Arm A compared to 4.6 months in Arm B (HR = 0.53, one-sided p value = 0.0167). The Kaplan-Meier survival curve for the subset of patients who received at least three doses (per protocol subset) as of October 2013 is shown below.

Phase 2a Overall Survival - Per Protocol Analysis Set



In addition to the 45 Arm A patients in the per protocol subset who received the combination of CRS-207 and GVAX Pancreas, three Arm B patients were crossed over into combination therapy. Of these 48 patients, nine survived longer than 24 months from randomization. None of the patients who received only GVAX Pancreas survived longer than 21 months. We continue to monitor the long-term survival of patients treated in our Phase 2a clinical trial. As of March 24, 2015, two patients continued to receive the combination treatment, one of whom was in the eighth course of combination treatment, and five patients remained in follow up.

Carbohydrate antigen 19-9, or CA 19-9, is a serum biomarker used in the diagnosis of pancreatic cancer in symptomatic patients and is being studied further to determine if it could also be used as a biomarker for prognosis, overall survival, response to chemotherapy and recurrence. While not statistically significant, we observed a higher proportion of patients with stable or declining levels of CA 19-9 during treatment in Arm A than in Arm B. There was no difference in progression-free survival, or PFS.

Side effects are known as adverse events, or AEs, and are graded in level of severity from Grade 1 to Grade 4. Grade 1 and 2 AEs are generally characterized as mild. Grade 3 AEs are considered moderate and Grade 4 AEs are considered severe. In our Phase 2a clinical trial, the most frequent drug-related Grade 3 or 4 AE was lymphopenia (an abnormally low level of white blood cells), with three patients experiencing Grade 3 lymphopenia and two patients experiencing Grade 4 lymphopenia. Lymphopenia is expected based on prior nonclinical studies and CRS-207's mechanism of action. In addition, the AEs of lymphopenia were self-correcting or did not reveal an unexpected pattern of toxicity. We currently do not plan to alter our development plan for CRS-207 based on these observed AEs of lymphopenia. There were no other Grade 4 AEs, and there were no other Grade 3 AEs with frequencies higher than five percent in either arm. The most common Grade 3 AEs were transient lymphopenia, fevers, elevated liver enzymes and fatigue.

Phase 2b ECLIPSE (Ongoing)

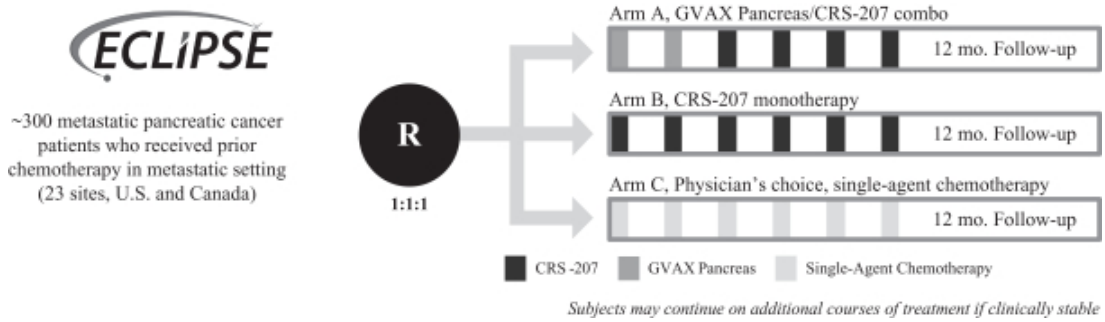
We are conducting our Phase 2b ECLIPSE clinical trial of CRS-207 in combination with GVAX Pancreas to treat late-stage metastatic pancreatic cancer patients who have received at least one prior line of therapy. The study is designed to evaluate the efficacy and safety of CRS-207 in combination with GVAX Pancreas, Arm A, compared to single agent chemotherapies, Arm C, commonly used in this setting. The study also includes an arm in which patients receive CRS-207 as a monotherapy, Arm B, to evaluate the contribution of GVAX Pancreas to the combination therapy. The three-arm trial will enroll approximately 300 patients at over 20 clinical trial sites in the United States and Canada.

Patients are being enrolled in two cohorts. The primary cohort will include approximately 190 patients who have received at least two prior treatment regimens for metastatic pancreatic cancer, or third+ line. The exploratory cohort will include approximately 110 patients who have received only one prior treatment regimen for metastatic pancreatic cancer, or second line. Patients will be randomized in a one to one to one ratio across each arm of the trial. Patients in Arm A will receive two doses of GVAX and four doses of CRS-207. Patients in Arm B will receive six doses of CRS-207. Patients in Arm C will receive a physician's choice of the following single-agent chemotherapies: gemcitabine, 5-Fluorouracil, capecitabine, irinotecan or erlotinib.

In Arms A and B, treatments will be administered at three-week intervals. Low-dose cyclophosphamide will be delivered intravenously one day before each GVAX Pancreas treatment. GVAX Pancreas will be administered as six intradermal injections. CRS-207 will be delivered by one-hour intravenous infusion followed by a four-hour observation period. Oral antibiotics are initiated seven days after the final CRS-207 vaccination of each treatment course. After a four-week rest, clinically stable patients are offered additional courses.

The primary objective is to compare overall survival, or OS, in the primary cohort between Arms A and C. Secondary/exploratory objectives include comparison of OS in both primary and exploratory cohorts between all treatment arms, assessment of safety and clinical responses through tumor assessments and CA19-9 levels, and correlation of *Listeria*- and mesothelin-specific T cell and other immunological responses with OS, PFS, best overall response and quality of life.

The study is 80% powered (one-sided overall alpha = 0.15) for the primary endpoint comparison of third+ line patients receiving Arm A versus chemotherapy alone Arm C.



We expect to complete enrollment in the third quarter of 2015 and to report top line results in the first half of 2016. Following the completion of the ECLIPSE study, we plan to initiate a global Phase 3 trial in metastatic pancreatic cancer patients who have received prior chemotherapy. We expect the trial would be randomized to evaluate overall survival in patients treated with our therapy in comparison to standard of care.

CRS-207 with GVAX Pancreas and Anti-PD-1 in Pancreatic Cancer

We have initiated a clinical trial using CRS-207 in combination with GVAX Pancreas and nivolumab, an anti-PD-1 checkpoint inhibitor, in metastatic pancreatic cancer. Nivolumab is being developed by Bristol-Myers Squibb and is currently approved in Japan for treatment of melanoma. We anticipate that combining CRS-207 and GVAX Pancreas with a checkpoint inhibitor may further improve clinical outcomes because of their complementary mechanisms of action.

About Anti-PD-1

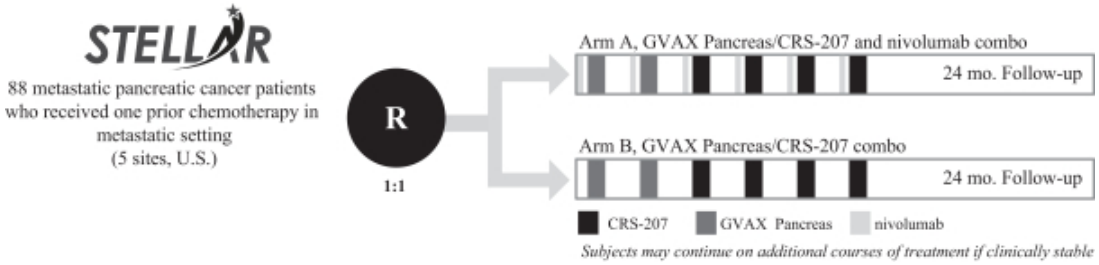
Programmed cell death protein 1, or PD-1, is expressed on the surface of activated T cells, B cells, and DCs. PD-1 and associated ligands, PD-L1 and PD-L2, negatively regulate immune responses with the ligands expressed on many murine tumor cell lines. Anti-PD-1/PD-L1 monoclonal antibodies, a class of checkpoint inhibitors, target this novel immunosuppressive pathway with the goal of strengthening the anti-tumor T cell response by impairing the interaction of the inhibitory receptor PD-1 on T cells with PD-L1 expressed on tumor cells. While anti-PD-1 therapies have shown efficacy in subsets of patients in some tumor types, patients with certain cancers have not responded to treatment with anti-PD-1 in early clinical trials, including pancreatic cancer patients. Based on preclinical models and early clinical data, we believe that checkpoint inhibitors when combined with strong adaptive immune cell stimulators, such as cancer vaccines, can have an amplified anti-tumor effect against poorly immunogenic tumors. These results provide rationale for further testing of checkpoint inhibitors in combination with other immunotherapies.

Clinical Status

The investigator-sponsored randomized controlled Phase 2b clinical trial, or STELLAR, is supported by Aduro, Bristol-Myers Squibb, Stand Up to Cancer, PanCAN/AACR and the Lustgarten Foundation. STELLAR is designed to explore the synergistic effects on our treatment regimen in combination with nivolumab. The first patient was dosed in the first quarter of 2015.

Phase 2b STELLAR (Ongoing)

Our Phase 2b STELLAR clinical trial is a randomized controlled Phase 2b clinical trial of CRS-207 in combination with GVAX Pancreas and nivolumab in patients with metastatic pancreatic cancer who have received only one prior line of therapy in the metastatic setting. The ongoing 88-patient randomized controlled two-arm Phase 2b clinical trial is anticipated to be conducted by leading investigators at up to five U.S. clinical trial sites. Patients receive either the combination therapy with nivolumab or the combination therapy alone. The primary endpoint of the trial is overall survival and secondary endpoints include evaluation of clinical and immune response and safety.



We expect to complete enrollment in the first quarter of 2016 and to report data from an interim analysis in the second half of 2016.

CRS-207 in Mesothelioma

Mesothelioma Overview

Malignant mesothelioma is a tumor in the tissue lining, most commonly the tissue lining surrounding the lungs. Mesothelioma is a relatively rare disease; it is estimated that the incidence in the United States is approximately 3,000 cases per year.

Malignant mesothelioma carries a poor prognosis with an mOS of approximately 12 months from diagnosis. Mesothelioma is currently treated with surgery, chemotherapy and radiotherapy.

CRS-207 with Chemotherapy in Mesothelioma

We are using CRS-207 in combination with standard-of-care chemotherapy for treatment in the front line-setting of unresectable malignant pleural mesothelioma. We have obtained orphan drug designation for CRS-207 for the treatment of mesothelioma.

About Chemotherapy

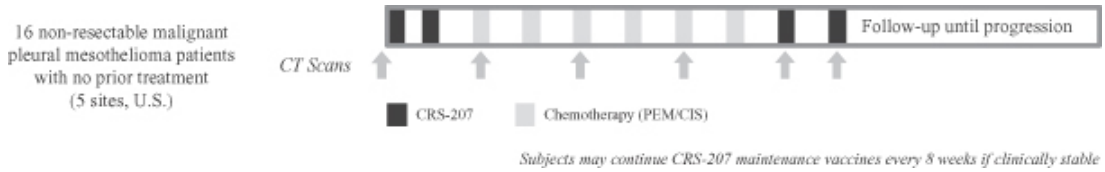
Chemotherapy can be an effective treatment option to enhance immune responses, inhibit immunosuppression and modify the tumor microenvironment to be more susceptible to immune-mediated killing. This provides a strong rationale to use chemotherapies in combination with a LADD product candidate to trigger robust innate and adaptive immune responses in a more susceptible tumor environment.

Clinical Status

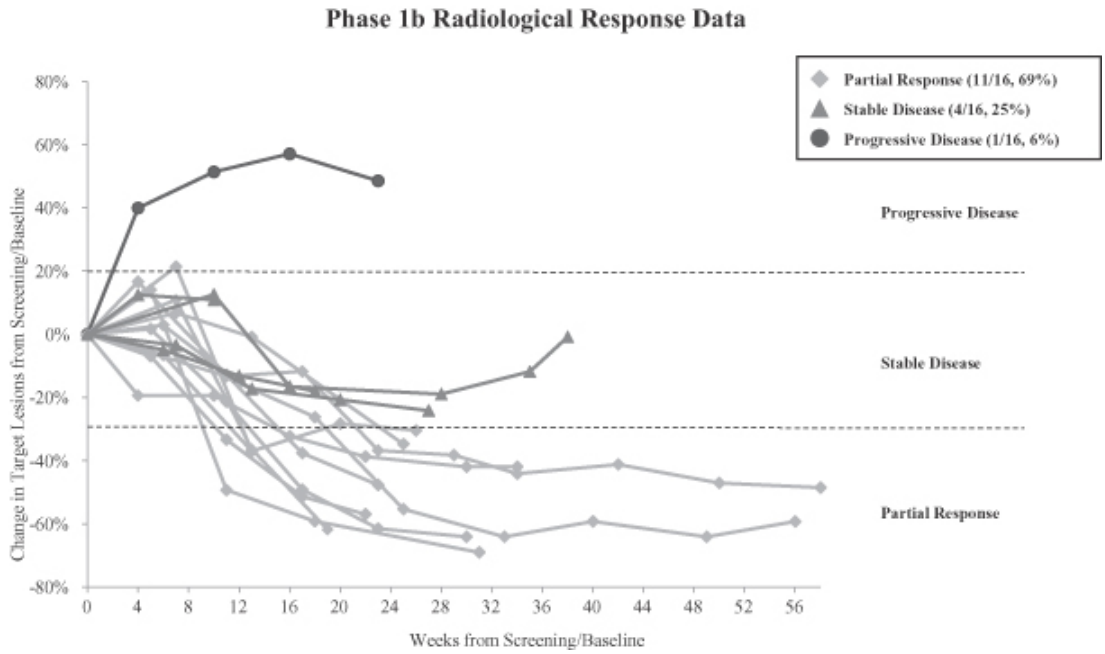
We are enrolling a single-arm Phase 1b clinical trial of CRS-207 in combination with standard-of-care chemotherapy in patients with unresectable malignant pleural mesothelioma who have not received prior therapy. Based on encouraging results in the initial cohort of 16 patients, we have opened an expansion cohort of up to a total of 40 patients. We expect to finish enrollment in 2015 and report final top line results in 2016.

Phase 1b (Ongoing)

The study design is single-arm; patients receive two prime CRS-207 vaccinations followed by standard-of-care chemotherapy, consisting of pemetrexed and cisplatin, or PEM/CIS, and then followed with boost and maintenance vaccinations of CRS-207. The study was initially designed to enroll 16 patients. The primary endpoints of the study are safety and immune response to the CRS-207 therapy. Secondary endpoints include tumor response, time to progression, immune analyses and tumor marker kinetics.



In June 2014, data from scheduled radiologic time points of the first 16 patients, shown below, were presented at the ASCO conference. Of 16 evaluable patients with response data, 69%, or 11 of the 16 patients, had confirmed durable partial responses and 25%, or 4 of the 16 patients, experienced stable disease after CRS-207 and chemotherapy, for a 94% rate of disease control (the sum of partial responses and stable disease). Radiologic images were also read by an independent, central radiologist supporting our investigators' findings. Based on these encouraging data, the protocol was amended to increase the enrollment in the trial by up to 24 patients for a total enrollment of up to 40 patients.



In October 2014, updated safety and efficacy data were presented at the International Mesothelioma Interest Group Conference. At the time of the presentation, estimated PFS was 7.5 months with one patient on study for more than 19 months, who continued to receive maintenance therapy with CRS-207 following the combination treatment.

Phase 2 (Planned)

We anticipate initiating a randomized controlled Phase 2 clinical trial in North America, Europe and Australia to evaluate PFS, overall response rate, OS and safety of the combination therapy of CRS-207 and standard-of-care chemotherapy.

ADU-623 in Glioblastoma Multiforme

ADU-623 is a bivalent LADD product candidate engineered to express EGFRvIII and NY-ESO-1, antigens expressed in glioblastoma multiforme, as well as other cancers.

Glioblastoma Multiforme Overview

Glioblastoma multiforme is a brain cancer with an incidence of approximately 11,000 people in the United States in 2013 according to Datamonitor Healthcare. These tumors are rapidly progressing, with a median time from diagnosis to the patient's death of approximately 15 months. In recurrent glioblastoma multiforme, treatment consists of both symptomatic and palliative therapies. However, with currently available therapies glioblastoma multiforme typically remains fatal within a very short period of time.

Clinical Status

ADU-623 is being evaluated in an ongoing Phase 1 clinical trial conducted by leading investigators at the Earle A. Chiles Research Institute at Providence Cancer Center in Portland, Oregon.

Phase 1 (Ongoing)

The Phase 1, dose escalation, safety and immunogenicity trial will enroll up to a total of 38 patients in the second-line. Second-line glioblastoma multiforme patients are those who have previously completed standard-of-care radiotherapy and temozolomide followed by adjuvant temozolomide or who have progressed following standard-of-care radiotherapy and chemotherapy. The study will evaluate three dose levels of ADU-623 with the primary endpoint of establishing the safety of the therapy and determining the optimal dose. The trial will also evaluate the patients' tumor responses and immune response to the ADU-623 therapy.

ADU-741 in Prostate Cancer

ADU-741 is a LADD product candidate engineered to express multiple antigens, and is under partnership with Janssen, which has exclusive rights to certain LADD-based product candidates specifically engineered for the treatment of prostate cancer.

Prostate Cancer Overview

According to the American Cancer Society, approximately one in seven men in the United States will be diagnosed with prostate cancer in his lifetime. According to Globocan, the incidence of prostate cancer was 233,000 cases in the United States and 1.1 million cases worldwide in 2012.

Development Status

In May 2014, we entered into an agreement whereby we granted Janssen an exclusive, worldwide license to certain product candidates specifically engineered for the treatment of prostate cancer, based on our novel LADD technology platform for any and all uses. We are eligible to receive up to a potential total of $365.0 million in upfront fees and development and commercialization milestones. Janssen will have exclusive rights to develop and commercialize LADD product candidates in prostate cancer and will assume responsibility for all research, development, manufacturing, regulatory and commercialization activities for the licensed products.

ADU-214 in Lung Cancer

ADU-214 is a bivalent LADD product candidate expressing EGFRvIII and mesothelin, and is licensed to Janssen, which has exclusive rights for LADD product candidates for lung cancer indications and exclusive rights to develop and commercialize LADD product candidates expressing these antigens for any and all uses.

Lung Cancer Overview

Lung cancer causes more deaths than the next three leading causes of cancer deaths—colon, breast and prostate cancers—combined. According to Globocan, there were an estimated 214,000 new cases of lung cancer diagnosed in the United States in 2012 and 1.8 million new cases of lung cancer diagnosed worldwide in 2012.

Development Status

In November 2014, an additional agreement with Janssen became effective, granting Janssen an exclusive, worldwide license to certain product candidates engineered for the treatment of lung cancer and certain other cancers based on our novel LADD technology platform for any and all uses. Under the agreement we are eligible to receive significant development, regulatory and commercialization milestone payments up to a potential total of $817.0 million. Janssen will have exclusive rights to develop and commercialize LADD product candidates in lung cancer and will assume responsibility for all research, development, manufacturing, regulatory and commercialization activities for the licensed products.

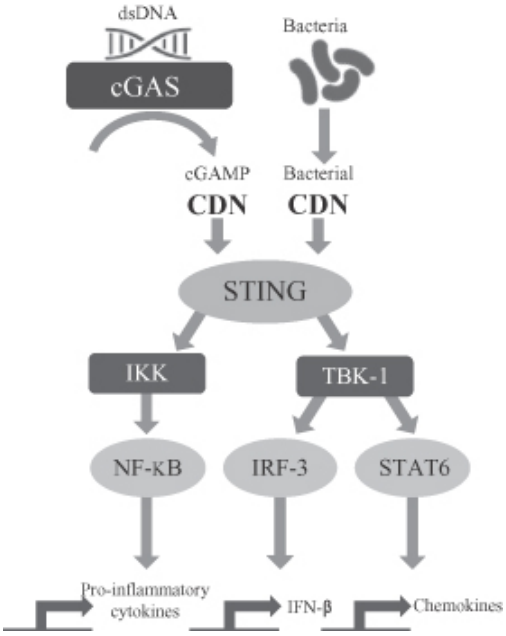
CDN Technology Platform Overview

Recent advancements reported in numerous leading scientific journals have generated significant interest and rationale for targeting the STING receptor as a novel therapeutic approach to immuno-oncology. We are developing a portfolio of synthetic proprietary CDN small molecule immune modulators that target and activate the STING receptor with applications across diverse diseases. The STING receptor is generally expressed at high levels in the cytosol of immune cells, including DCs. Once activated, the STING receptor initiates a profound innate immune response by signaling through three distinct pathways, inducing the expression of a broad profile of cytokines, including interferons and chemokines. This cytokine profile subsequently leads to the development of an effective tumor antigen-specific T cell adaptive immune response.

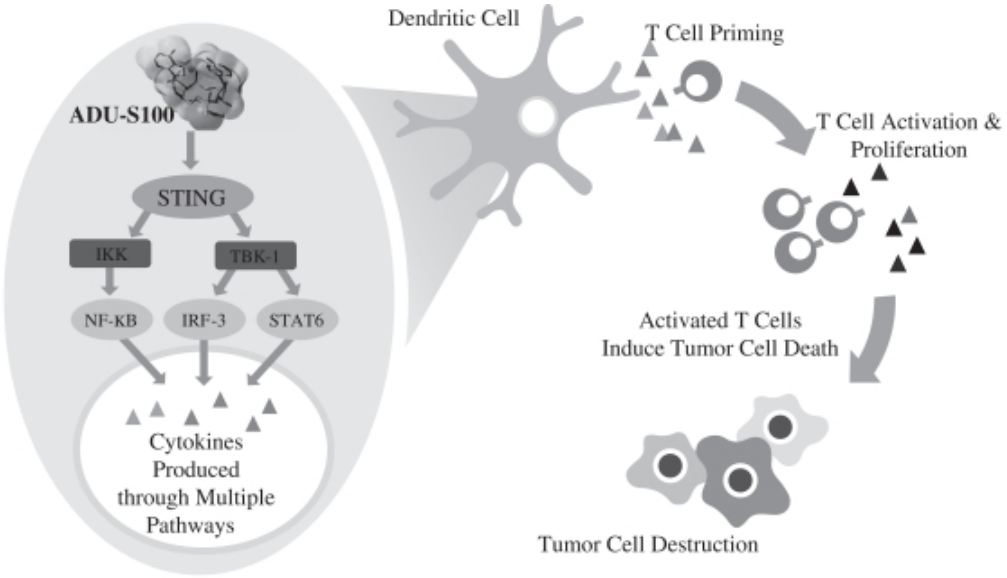
Naturally occurring CDNs that target the STING receptor are produced by bacteria that secrete CDNs into the host cell or by mammalian cells through cyclic GMP-AMP synthetase, or cGAS. cGAS is a recently discovered receptor that senses double-stranded, or ds, DNA in the cytosol of APCs, and in response synthesizes a CDN that is structurally distinct from the CDNs produced by bacteria. While both bacterial- and cGAS-produced CDNs target the STING receptor, CDNs produced by cGAS bind more tightly to STING than CDNs produced by bacteria. This stronger binding triggers a larger and more stable change in shape of the STING receptor, leading to the development of a more effective tumor antigen-specific immune response. Additionally, while some of the five unique STING receptors in humans respond poorly to CDNs produced by bacteria, all respond to CDNs produced by cGAS. All our novel synthetic CDN product candidates that we are advancing through preclinical development contain a structure based on the cGAS-produced CDN structure, thus stimulating potent innate immune responses to all of the known human STING receptors.

We have developed proprietary CDN derivative compounds that are significantly more potent than the natural cGAS-produced molecules, which can be demonstrated by comparing the expression levels the cytokines produced from signaling through three distinct pathways. The NF-kB pathway induces the expression of numerous pro-inflammatory cytokines, including IL-6 and TNFa that stimulate a variety of immune cells. The IRF-3 pathway leads to the induction of IFN-b and co-regulated genes which orchestrate diverse innate immune responses. The STAT6 pathway leads to expression of chemokines, including CCL2 and CCL20, that are

involved in immune cell recruitment. The unique profile of cytokines induced through activating the STING receptor results in strong efficacy in numerous aggressive preclinical mouse models of cancer.



In healthy individuals, DCs and other APCs constantly sample nearby tumor and non-tumor cells, however, in cancer patients, tumors can produce immune-inhibitory molecules which can make the DCs non-functional. The activation of the STING receptor in the tumor microenvironment by IT injection of our proprietary CDN product candidates stimulate the maturation of the DCs, leading to the presentation of antigens found on the individual's unique tumor. The activated tumor-specific T cells induce tumor cell death both locally and systemically, resulting in significant and durable therapeutic efficacy in preclinical tumor models.



CDN Product Candidates

We envision multiple immuno-oncology CDN product opportunities as a monotherapy or in combination with other cancer treatments. In preclinical animal models, our data have shown that our proprietary CDN product candidates can be combined with designated recombinant proteins to induce potent antigen-specific CD4+, which recognize foreign antigens and assist in the immune response, and CD8+, which recognize and destroy cells expressing foreign antigens, T cell immunity. We believe our CDN product candidates can also be combined with conventional cancer treatments such as chemotherapy and radiotherapy to enhance our CDN product candidates' immune-mediated tumor killing mechanisms. We also believe that our CDN product candidates could alter the nature of the tumor microenvironment, thus allowing for improved responses to checkpoint inhibitors.

ADU-S100

Our proprietary modifications to the mammalian CDN structure are designed to optimize stability, STING receptor binding affinity and potency, without significant toxicity. Our lead product candidate based on these criteria is ADU-S100. In March 2015, we entered into a worldwide collaboration with Novartis to further advance the research and development of CDN product candidates in oncology.

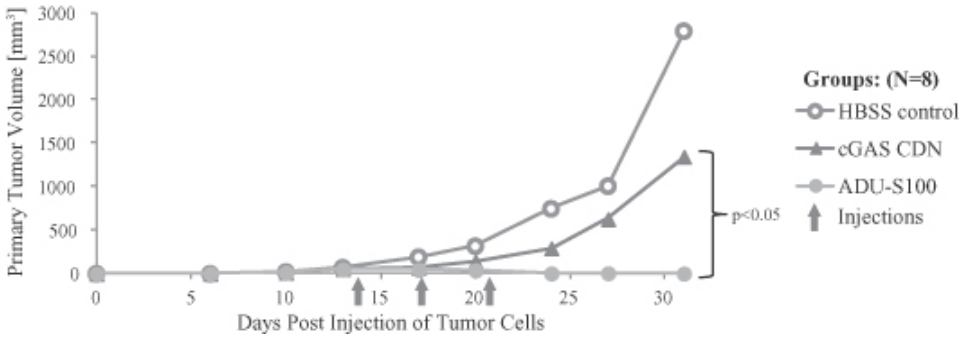
ADU-S100 CDN Preclinical Studies

In preclinical mouse tumor models, IT injection of ADU-S100 induced tumor shrinkage and generated substantial immune responses that may be capable of providing long-lasting systemic antigen-specific T cell immunity to prevent further growth of distal, untreated tumor metastases, a response known as an abscopal effect. Further preclinical studies demonstrated that the abscopal effect is entirely STING receptor-dependent. These data provide the rationale for advancing this novel molecule for the treatment of locally advanced or metastatic cancers.

Further rationale for the approach of IT injection of CDN product candidates is the recent discovery by Dr. Thomas Gajewski of the University of Chicago that the STING-dependent innate immune sensing in the tumor microenvironment is a critical step in promoting spontaneous tumor-initiated T cell priming, subsequent infiltration of tumor lymphocytes and tumor regression. Analyses conducted with tumors isolated from melanoma patients have also revealed that tumors containing infiltrating activated T cells are characterized by an IFN-ß transcriptional signature. Studies in mice have demonstrated that IFN-ß signaling plays a critical role in tumor-initiated T cell priming. We believe that treatment strategies to induce IFN-ß signaling and DC activation in the tumor microenvironment to bridge the innate and adaptive immune responses have significant therapeutic potential. IT delivery of our synthetic CDN product candidates activate a tumor-specific T cell response that is unique to the individual's tumor; conceptually, a small molecule approach to patient-specific immuno-oncology treatments.

Single Agent ADU-S100 (B16 Melanoma Therapeutic Model)

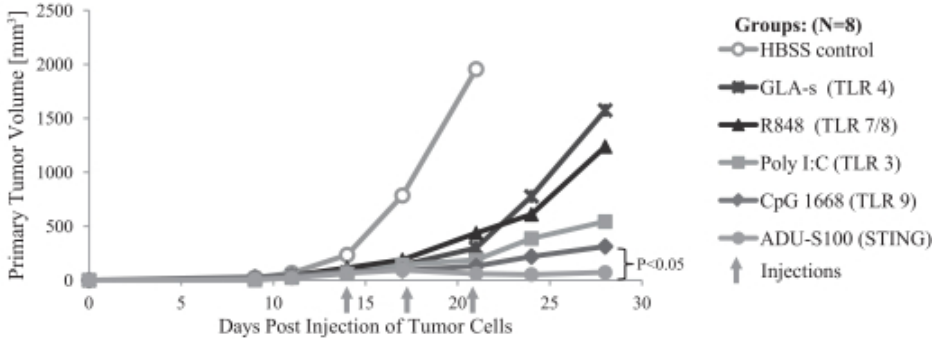
Proprietary CDN versus Naturally Occurring



In the preclinical study depicted above, mice were injected with melanoma tumor cells. Once the tumor grew to be 100 mm3, groups of mice were given three 50 µg IT doses of ML cGAMP, a naturally occuring cGAS CDN, or ADU-S100. In addition, one group was treated with Hank's Balanced Salt Solution, or HBSS, as a control. All three doses of the compounds were given over the same one-week period. In this study we demonstrated that our synthetic CDN product candidate in mice had superior anti-tumor activity as compared to a naturally occurring cGAS CDN.

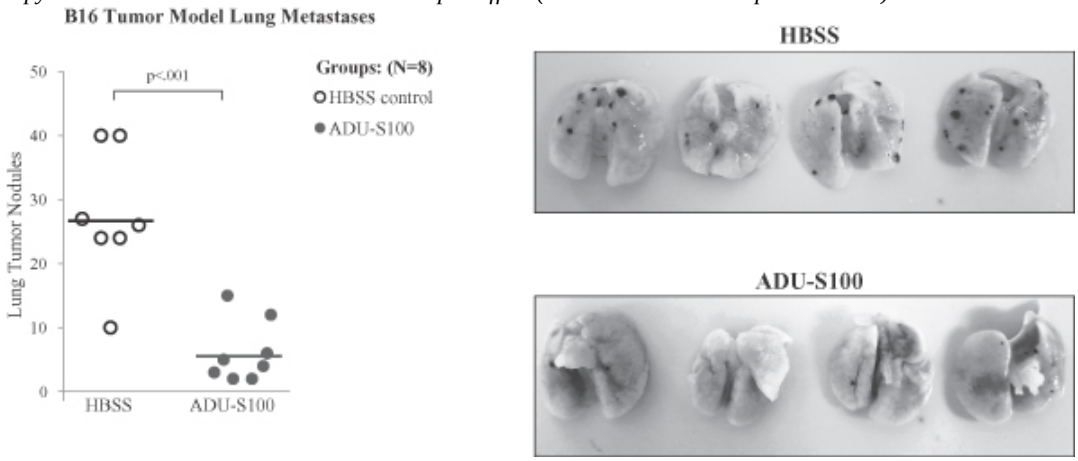
ADU-S100 Versus TLR Ligands (B16 Melanoma Therapeutic Model)

Proprietary CDN versus TLR Ligands



In this experiment, similar in design to the prior experiment, mice were injected with melanoma tumor cells and received three IT doses of select compounds over the same one-week period once the tumors grew to be 100 mm3. ADU-S100 was compared to TLR ligand product candidates in order to compare against other innate immune activators which are currently in clinical development by other companies. The doses of the IT injections for the TLR ligands and ADU-S100 were kept constant at 50 µg. While it is appreciated that the doses may not be optimized for each TLR ligand, the same dosing was used for consistency. In addition, one group was treated with HBSS, as a control. The results from this study supported the selection of ADU-S100 for tumor regression and control.

IT CDN Therapy with ADU-S100 Induces a Potent Abscopal Effect (B16 Melanoma Therapeutic Model)



In the preclinical study designed to examine the abscopal effect, mice were injected with melanoma cells on their right flank to create the primary tumor, and also given additional melanoma cells one week later by intravenous injection to create lung metastases, distal tumor lesions. The primary tumor was treated three times over a one-week period with 50 µg of ADU-S100, or HBSS, as a control. On day 28, the lungs were examined to determine the number of lung metastases. Mice treated with ADU-S100 in the primary tumor showed significant inhibition of the treated tumor and additionally demonstrated a significant inhibition of distant lung metastases. The photographs of the lungs are representative of the two treatment groups and show the contrast in the number of lung metastases (black nodules) between the control group, where numerous metastases are visible, and the treatment group, where only a few metastases are visible. Thus, these results show that IT injection with ADU-S100 primes an effective systemic CD8+ T cell immune response that significantly inhibits the growth of distal untreated lesions.

Development Status

In March 2015, we established a worldwide collaboration with Novartis to further advance the research and development of CDN product candidates in oncology. We are currently conducting IND-enabling activities for ADU-S100, our first CDN product candidate.

CDN Product Opportunities

We envision multiple product opportunities for the CDN technology platform. We believe that our CDN product candidates can be used as a monotherapy to directly activate the tumor microenvironment, enhancing recognition of the tumor by the immune system and leading to tumor destruction. In preclinical animal models, we have shown that our proprietary CDN product candidates can be co-formulated with designated recombinant proteins to induce potent antigen-specific CD4+ and CD8+ T cell immunity. We believe that due to our CDN product candidates' immune-mediated tumor killing mechanisms and ability to alter the nature of the tumor microenvironment our proprietary CDN product candidates could be combined with conventional and novel therapies, such as cellular vaccines, chemotherapy, radiotherapy and checkpoint inhibitors, among others.

In addition, our CDN product candidates directly activate NK cells and could enhance Antibody-Dependent Cellular Cytotoxicity, or ADCC, tumor cell killing mechanisms, which are a significant mechanism of action of several established monoclonal antibody therapies. Another possible opportunity for our CDN technology platform would be to directly conjugate our CDN product candidates to enhance ADCC.

We also believe that our CDN product candidates have the potential to be used in treatments for infectious and autoimmune diseases as an adjuvant to enhance existing vaccines or in formulations for new products. We are also developing other CDN derivatives that, in contrast to our current CDN product candidate that activate the STING receptor, would block the STING receptor, thus preventing or controlling the immune response which is a key in the treatment of autoimmune diseases.

Manufacturing

Overview

We rely on third-party contract manufacturing organizations, or CMOs, to produce our product candidates for clinical use and currently do not own or operate manufacturing facilities. We have established manufacturing processes, and supply and quality agreements for all of the investigational agents used in our ongoing clinical trials. We require that our CMOs produce bulk drug substances and finished drug products in accordance with current Good Manufacturing Practices, or cGMPs, and all other applicable laws and regulations. We may continue to rely on CMOs to manufacture our products for commercial sale. We maintain agreements with potential and existing manufacturers that include confidentiality and intellectual property provisions to protect our proprietary rights related to our product candidates.

LADD Product Candidates

LADD product candidates are produced through a fermentation process and then concentrated and purified. The drug substance is diluted into a cryopreservative and filled into vials that are inspected, labeled and frozen as final drug product. We have contracts with IDT Biologika GmbH, or IDT, and Waisman Clinical BioManufacturing to produce and release LADD product candidates. We recently transitioned manufacturing of our lead LADD product candidate, CRS-207, to IDT, which can support commercial manufacturing.

Under our process development and manufacturing agreement with IDT, which we entered into in December 2013, IDT provides manufacturing services for CRS-207. We pay for manufacturing services performed by IDT under the agreement pursuant to a work plan described in the agreement.

We may unilaterally terminate the agreement in the event of a material breach of the agreement by IDT if such breach remains uncured after 45 days of receiving written notice of such breach. In addition, either party may terminate the agreement in the event of the other party's insolvency. Either party may also terminate the agreement by providing 30 days' written notice to the other party if we decide to end our CRS-207 program, solely for reasons of clinical inefficacy or safety, or an action by the FDA, EMA or other regulatory authority not granting approval despite commercially reasonable efforts to gain such approval.

GVAX Pancreas Product Candidates

GVAX Pancreas product candidates are engineered cell lines that express GM-CSF and have been lethally irradiated to prevent replication. GVAX Pancreas is composed of two allogeneic pancreatic cancer cell lines that are expanded in cell factories. The cells are harvested, concentrated, purified and then lethally gamma irradiated. GVAX Pancreas is frozen, stored and transported in vapor-phase liquid nitrogen. We have contracts with Lonza Walkersville, Inc., or Lonza, and JHU to produce and release GVAX Pancreas product candidates. We recently began transferring the manufacturing process to Lonza, which can support commercial production of GVAX Pancreas product candidates.

Under our manufacturing services agreement with Lonza , which we entered into in August 2012, Lonza provides manufacturing services to produce cell lines for our GVAX Pancreas product candidates. We pay for manufacturing services performed by Lonza under the agreement pursuant to statements of work entered into from time to time.

We may unilaterally terminate the agreement upon 45 days' written notice to Lonza. Lonza may terminate the agreement upon 12 months' written notice to us. Either party may terminate the agreement in the

event of the other party's insolvency or for the other party's material breach of the agreement if such breach remains uncured after 30 days of receiving written notice of such breach or after 90 days of receiving written notice of such breach if such breach is not capable of being cured within 30 days and the breaching party is making diligent efforts to cure such breach. Absent early termination, the agreement will continue until the fifth anniversary of the effective date of the original agreement.

CDN Product Candidates

Manufacturing for the CDN technology platform generally encompasses both the chemical synthesis of the active pharmaceutical ingredient, or API, and its formulation and fill/finish of the final product. The synthetic process for the manufacture of our CDN product candidates is a trade secret and we retain control and ownership of the process. We have contracted with a CMO to produce, release and stability test the ADU-S100 API. We have also entered into a drug product manufacturing and clinical supply agreement with a CMO for the formulation and fill/finish and release and stability testing of the drug product candidate.

Intellectual Property

Intellectual property is of vital importance in our field and in biotechnology generally. We seek to protect and enhance proprietary technology, inventions, and improvements that are commercially important to the development of our business by seeking, maintaining, and defending patent rights, whether developed internally or licensed from third parties. We will also seek to rely on regulatory protection afforded through orphan drug designations, data exclusivity, market exclusivity and patent term extensions where available.

We have obtained orphan drug designations for GVAX Pancreas and CRS-207 for the treatment of pancreatic cancer and for CRS-207 for the treatment of mesothelioma, which makes them eligible for a period of orphan drug exclusivity, if approved, under certain conditions. We believe that each of our different biological products approved under a biologics license application, or BLA, will be eligible for 12 years of market exclusivity in the United States, 10 years of market exclusivity in Europe and significant durations in other markets, which would be complementary to any relevant patent exclusivity.

Through licensing and through developing our own portfolio, we have rights to more than 100 issued patents and more than 50 pending applications in the United States and foreign countries. Families within the portfolio are directed to our LADD and CDN technology platforms, and to GVAX.

LADD Technology Platform

We own eleven issued U.S. patents, seven pending U.S. patent applications, and corresponding foreign issued patents and patent applications, and additionally we are the exclusive licensee to families of patents and patent applications, all relating to our LADD technology platform. The issued U.S. patents that we own expire between 2022 and 2027, not including any patent term extensions that may be available under U.S. laws. The patents and patent applications, if issued, cover attenuated *Listeria* strains that have deleted or disrupted genomic *actA* and *inlB* virulence genes in conjunction with the expression of non-*Listeria* polypeptides, as well as to *Listeria* strains that are engineered to express non-*Listeria* polypeptides, including cancer antigens or fragments thereof. There are also patents and patent applications, if issued, that cover proprietary antigen expression cassettes and methods which are applicable to *Listeria* generally and not limited to any particular strain or method of attenuation.

Antigen Expression

Within this portfolio are issued U.S. patents and pending U.S. applications, and corresponding foreign issued patents and patent applications, directed to *Listeria* strains that are engineered to express particular cancer antigens or fragments thereof, including mesothelin and NY-ESO-1. This portfolio includes U.S. patents covering CRS-207, which expire in 2024 and 2026, not giving effect to any potential patent term adjustment or extension that may be available on a jurisdictional basis and assuming payment of all appropriate maintenance, renewal, annuity or other governmental fees. We have also filed U.S. and international patent applications

directed to a modified *actA* fusion protein, which, if issued, would cover ADU-623, ADU-214 and our future LADD product candidates. If patents with such claims are issued, they could extend the technology platform patent protection for such products until 2033.

EGFRvIII Family

Within this portfolio are pending U.S. and corresponding foreign patent applications that we co-own with Providence Health & Services–Oregon, a family of patent applications that are directed to *Listeria* strains that express EGFRvIII antigen. This technology is included in our ADU-623, ADU-214 and other product candidates. A patent that would issue from such application would expire in 2031.

Combination Therapy with LADD

Additionally, within this portfolio are U.S. patents and pending applications directed to compositions that can be used in conjunction with or as an adjuvant to the LADD technology platform. For example, we have received a notice of allowance in the United States to claims directed to a method of enhancing an immune response to mesothelin by administering a boost dose of an attenuated *Listeria* that encodes an active mesothelin antigen after administration of an effective amount of a tumor cell that encodes mouse GM-CSF. Claims directed to such method have been allowed and are expected to issue. If such claims issue, they could cover the use of CRS-207 and would expire in 2027. In addition, we have also filed a U.S. application and foreign applications directed to a method of treating cancer by administering a cancer antigen expressing *Listeria* after administration of an effective amount of radiotherapy. If such claims issue, they would expire in 2031.

CDN Family

We own and license families of patent applications directed to our CDN product candidates, which target the STING receptor, which, if issued, would expire between 2025 and 2036. In particular, we own three pending U.S. patent applications and corresponding pending foreign patent applications directed to stereochemically pure cyclic purine dinucleotides, which if issued would expire in 2033, and a provisional patent application directed to certain substituted cyclic purine dinucleotides, which if issued would expire in 2036. Within this portfolio are U.S. and international patent applications directed to systems and methods for activating STING utilizing our CDN product candidates that are jointly owned with the Regents of the University of California, and which, if issued, would expire in 2034. Also within this portfolio are U.S. and international patent applications directed to the use of our CDN product candidates in conjunction with cytokine expressing cells, for instance CSF-expressing cells, that are owned jointly JHU, and which, if issued, would expire in 2033 and 2034 respectively. We also license a family of patents from Karagen Pharmaceuticals directed to certain CDN molecules and their use in modulating immune response in a patient, which expire in 2025, a family of patents from the Regents of the University of California also directed to certain CDN molecules and their uses that, if issued, would expire in 2034, and a family of patents from a consortium of universities led by Memorial Sloan Kettering also directed to certain CDN molecules and their uses that, if issued, would expire in 2034.

GVAX Technology

We own ten issued U.S. patents and four pending U.S. patent applications and exclusively license multiple families of patents and patent applications that cover cell lines that express GM-CSF. This technology is referred to as GVAX. We license a family of patents from JHU that covers the first generation GVAX platform, including a U.S. patent specifically covering GVAX Pancreas. The patents in this family are expected to expire between 2016 and 2022; however, we have a license with JHU for continued exclusive use of the cell lines produced by JHU after the patents expire. Additionally, in 2013, we entered into another license agreement with JHU relating to GVAX technology that includes toll-like receptor ligands. This GVAX technology includes two international patent applications, which, if issued, would expire in 2031 to 2032.

Other Technology

In addition to the technologies described in detail above, we license or own other intellectual property directed to compositions and methods that could be used in conjunction with our *Listeria* technology platform. The intellectual property is directed to, for example, methods of administering our *Listeria* products in conjunction with other therapeutics. Additionally, we have licensed technology from UC Berkeley that enables us to integrate expression sequences more easily into *Listeria* and allows us to develop multivalent vaccines more quickly and efficiently. We have an exclusive license to this technology, which expires in 2023, subject to any extensions or disclaimers of the licensed patents.

General Considerations

As with other biopharmaceutical companies, our ability to maintain and solidify a proprietary position for our lead product candidates will depend upon our success in obtaining effective patent claims that cover such product candidates and their intended methods of use, and enforcing those claims once granted.

The term of a patent that covers an FDA-approved drug or biologic may be eligible for patent term extension, which provides patent term restoration as compensation for the patent term lost during the FDA regulatory review process. The Drug Price Competition and Patent Term Restoration Act of 1984, or the Hatch-Waxman Act, permits a patent term extension of up to five years beyond the expiration of the patent. The length of the patent term extension is related to the length of time the drug or biologic is under regulatory review. Patent extension cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval and only one patent applicable to an approved drug or biologic may be extended. Similar provisions are available in Europe and other foreign jurisdictions to extend the term of a patent that covers an approved drug or biologic. In the future, if and when our biopharmaceutical products receive FDA approval, we expect to apply for patent term extensions on patents covering those products.

Many biopharmaceutical companies, biotechnology companies and academic institutions are competing with us in the field of oncology and filing patent applications potentially relevant to our business. Even when a third-party patent is identified, we may conclude upon a thorough analysis, that we do not infringe upon the patent or that the patent is invalid. If the third-party patent owner disagrees with our conclusion and we continue with the business activity in question, we may be subject to patent litigation. Alternatively, we might decide to initiate litigation in an attempt to have a court declare the third-party patent invalid or non-infringed by our activity. In either scenario, patent litigation typically is costly and time-consuming, and the outcome can be favorable or unfavorable.

In addition to patents, we rely upon unpatented trade secrets, know-how and continuing technological innovation to develop and maintain a competitive position. We seek to protect our proprietary information, in part, through confidentiality agreements with our employees, collaborators, contractors and consultants, and invention assignment agreements with our employees. We also have agreements with some of our consultants that require them to assign to us any inventions created as a result of their working with us. The confidentiality agreements are designed to protect our proprietary information and, in the case of agreements or clauses requiring invention assignment, to grant us ownership of technologies that are developed through a relationship with a third party.

Our commercial success will depend in part upon not infringing upon the proprietary rights of third parties. It is uncertain whether the issuance of any third-party patent would require us or our licensee(s) to alter our development or commercial strategies, obtain licenses, or cease certain activities. The biopharmaceutical industry is characterized by extensive litigation regarding patents and other intellectual property rights. If a third party commences a patent infringement action against us, or our licensee(s), it could consume significant financial and management resources, regardless of the merit of the claims or the outcome of the litigation.

We may rely, in some circumstances, on trade secrets to protect our technology. However, trade secrets can be difficult to protect. We seek to protect our proprietary technology and processes, in part, by entering into

confidentiality agreements with our employees, consultants, scientific advisors and contractors. We also seek to preserve the integrity and confidentiality of our data and trade secrets by maintaining physical security of our premises and physical and electronic security of our information technology systems. While we have confidence in these individuals, organizations and systems, agreements or security measures may be breached, and we may not have adequate remedies for any breach. In addition, our trade secrets may otherwise become known or be independently discovered by competitors. To the extent that our consultants, contractors or collaborators use intellectual property owned by others in their work for us, disputes may arise as to the rights in related or resulting know-how and inventions.

Collaborations

Janssen ADU-741 Agreement

In May 2014, we entered into a research and license agreement with Janssen Biotech, Inc., or Janssen, pursuant to which we granted Janssen an exclusive, worldwide license under intellectual property rights controlled by us to research, develop, manufacture, use, sell and otherwise exploit products containing ADU-741 for any and all uses. Under this Agreement, or the Janssen ADU-741 Agreement, we also granted Janssen the right, subject to availability, to develop specified derivatives of the *Listeria* strain. Janssen will have exclusive rights to develop LADD product candidates in prostate cancer and to develop and commercialize the licensed products and will assume responsibility for all research, development, manufacturing, regulatory and commercialization activities for the licensed products.

In partial consideration for the grant of this license, Janssen paid us $12.0 million as an upfront license fee. Additionally, under the Janssen ADU-741 Agreement we are eligible to receive from Janssen up to an aggregate of $7.5 million upon our achievement and performance of specified technology transfers and development and regulatory milestones pursuant to an agreed upon plan, an aggregate of $103.5 million upon Janssen's achievement of specified development and regulatory milestones, and an aggregate of $242.0 million upon Janssen's achievement of specified commercial milestones. Janssen is also obligated to pay us royalties on net sales of licensed products by Janssen, its affiliates and sublicensees at a rate ranging from the mid-single digits to the low teens based on the aggregate annual net sales of licensed products worldwide and based on the country of sale. Janssen's royalty obligation continues on a licensed product-by-licensed product and country-by-country basis until the later of (i) 12 years from the date of first commercial sale of such licensed product in such country, (ii) expiration of the last valid claim in the licensed patents covering the composition of matter or the approved method of use of such licensed product or (iii) the expiration of data exclusivity with respect to such licensed product in such country.

The Janssen ADU-741 Agreement will continue in effect until the later of expiration of all of the licensed patents and on a product-by-licensed product and country-by-country basis, the expiration of Janssen's royalty obligations with respect to such licensed product in such country. Either party may terminate the Janssen ADU-741 Agreement upon the other party's uncured material breach that is not cured within 60 days after the breaching party receives notice of such breach, provided, that Janssen may elect to make specified modifications to the agreement in lieu of terminating the agreement in the event we fail to timely cure any material breach of this agreement. Additionally, either party may terminate the Janssen ADU-741 Agreement for the other party's insolvency and Janssen may terminate this agreement at will after the first anniversary of the effective date upon 90 days' written notice. If the Janssen ADU-741 Agreement is terminated early for reasons other than our uncured material breach, Janssen is obligated to grant us a license to specified patents and know-how to exploit the terminated licensed products in the terminated countries.

Janssen ADU-214 Agreement

In November 2014, a research and license agreement with Janssen became effective, pursuant to which we granted Janssen an exclusive worldwide license under intellectual property rights controlled by us to research,

develop, manufacture, use, sell and otherwise exploit products containing ADU-214 for any and all uses. Under this Agreement, or the Janssen ADU-214 Agreement, we also granted Janssen the right, subject to availability, to develop specified derivatives of the *Listeria* strain. Janssen will have exclusive rights to develop LADD product candidates in lung cancer and to develop and commercialize the licensed products and will assume responsibility for all research, development, manufacturing, regulatory and commercialization activities for the licensed products.

In partial consideration for the grant of this license, Janssen paid us $30.0 million as an upfront license fee. Additionally, under the Janssen ADU-214 Agreement we are eligible to receive from Janssen up to an aggregate of $11.0 million upon our achievement and performance of specified technology transfers and development and regulatory milestones pursuant to an agreed upon plan, an aggregate of $184.5 million upon Janssen's achievement of specified development and regulatory milestones, and an aggregate of $591.5 million upon Janssen's achievement of specified commercial milestones. Janssen is also obligated to pay us royalties on net sales of licensed products by Janssen, its affiliates and sublicensees at a rate ranging from the high-single digits to the low teens based on the aggregate annual net sales of licensed products worldwide and based on the country of sale. Janssen's royalty obligation continues on a licensed product-by-licensed product and country-by-country basis until the later of (i) 12 years from the date of first commercial sale of such licensed product in such country, (ii) expiration of the last valid claim in the licensed patents covering the composition of matter or the approved method of use of such licensed product or (iii) the expiration of data exclusivity with respect to such licensed product in such country.

The Janssen ADU-214 Agreement will continue in effect until the later of expiration of all of the licensed patents and on a product-by-licensed product and country-by-country basis, the expiration of Janssen's royalty obligations with respect to such licensed product in such country. Either party may terminate the Janssen ADU-214 Agreement upon the other party's uncured material breach that is not cured within 60 days after the breaching party receives notice of such breach, provided, that Janssen may elect to make specified modifications to the agreement in lieu of terminating the agreement in the event we fail to timely cure any material breach of this agreement. Additionally, either party may terminate the Janssen ADU-214 Agreement for the other party's insolvency and Janssen may terminate this agreement at will after the first anniversary of the closing date of the Janssen ADU-214 Agreement upon 90 days' written notice. If the Janssen ADU-214 Agreement is terminated early for reasons other than our uncured material breach, Janssen is obligated to grant us a license to specified patents and know-how to exploit the terminated licensed products in the terminated countries.

Janssen GVAX Prostate Agreement

In May 2014, we also entered into a license agreement with Janssen, or the Janssen GVAX Prostate Agreement, pursuant to which we granted Janssen an exclusive worldwide license under intellectual property rights controlled by us to research develop, manufacture, use, sell and otherwise exploit products containing GVAX Prostate for any and all uses. Janssen will have exclusive rights to develop and commercialize the licensed products and will assume responsibility for all research, development, manufacturing, regulatory and commercialization activities for the licensed products.

In partial consideration for the grant of this license, Janssen paid us $500,000 as an upfront license fee. Additionally, under the Janssen GVAX Prostate Agreement we are eligible to receive from Janssen up to $2.0 million upon Janssen's achievement of a specified commercial milestone. Janssen is also obligated to pay us royalties on net sales of licensed products by Janssen and its affiliates and sublicensees at a rate in the mid- to high-single digits. Janssen's royalty obligation continues on a licensed product-by-licensed product and country-by-country basis until 12 years from the date of first commercial sale of such licensed product in such country.

The Janssen GVAX Prostate Agreement will continue in effect until the later of expiration of all of the licensed patents and on a licensed product-by-licensed product and country-by-country basis, the expiration of Janssen's royalty obligations with respect to such licensed product in such country. Either party may terminate

the Janssen GVAX Prostate Agreement upon the other party's uncured material breach that is not cured within 60 days after the breaching party receives notice of such breach, provided, that Janssen may elect to make specified modifications to the agreement in lieu of terminating the agreement in the event we fail to timely cure any material breach of this agreement. Additionally, either party may terminate the Janssen GVAX Prostate Agreement for the other party's insolvency and Janssen may terminate this agreement at will after the first anniversary of the effective date upon 90 days' written notice. If the Janssen GVAX Prostate Agreement is terminated early for reasons other than our uncured material breach, Janssen is obligated to grant us a license to specified patents and know-how to exploit the terminated licensed products in the terminated countries.

Novartis Agreement

In March 2015, we entered into a collaboration and license agreement with Novartis Pharmaceuticals Corporation, or Novartis, pursuant to which we are collaborating worldwide with Novartis regarding the development and commercialization of products containing an agonist of the molecular target known as STING in the field of oncology, including immuno-oncology and cancer vaccines. Under this agreement, or the Novartis Agreement, we granted Novartis a co-exclusive license to develop such products worldwide, an exclusive license to commercialize such products outside the United States and a non-exclusive license to support us in commercializing such products in the United States if we request such support. The collaboration is guided by a joint steering committee with each party having final decision making authority regarding specified areas of development or commercialization.

Pursuant to the Novartis Agreement, each party is obligated to use commercially reasonable efforts to perform specified development activities in accordance with a development plan. Novartis is obligated to use commercially reasonable efforts to commercialize products developed under the collaboration outside the United States and we are obligated to use commercially reasonable efforts to commercialize the products in the United States.

Under the Novartis Agreement, we received an upfront payment of $200 million from Novartis. We are also eligible to receive up to an additional $250 million in development milestones and up to an additional $250 million in regulatory approval milestones.

We are responsible for 38% of the joint development costs worldwide and Novartis is responsible for the remaining 62% of the joint development costs worldwide. We will also receive 50% of all profits for any products commercialized pursuant to this collaboration in the United States and 45% of all profits for specified European countries and Japan. For each of these profit share countries, each party will be responsible for its respective commercial sharing percentage of all joint commercialization costs incurred in that country. For all other countries where we are not sharing profits, Novartis will be responsible for all commercialization costs and will pay us a royalty in the mid-teens on all net sales of product sold by Novartis, its affiliates and sublicensees, with such percentage subject to reduction post patent and data exclusivity expiration and subject to reduction, capped at a specified percentage, for royalties payable to third party licensors. Novartis' royalty obligation will run on a country-by-country basis until the later of expiration of the last valid claim covering the product, expiration of data exclusivity for the product and 12 years after first commercial sale of the product in such country.

With respect to the United States, specified European countries and/or Japan, we may elect for such region to either reduce by 50% or to eliminate in full our development cost sharing obligation. If we elect to reduce our cost sharing percentage by 50% in any such region, then our profit share in such region will also be reduced by 50%. If we elect to eliminate our development cost sharing obligation, then such region will be removed from the profit share, and instead Novartis will owe us royalties on net sales of product for such region, as described above.

The Novartis Agreement will continue in effect until the later of (i) the date on which the parties mutually agree to cease the commercialization of products in the profit share region and (ii) the date on which

Novartis' royalty obligations cease. Either party may terminate the Novartis Agreement upon the other party's uncured material breach, for the other party's bankruptcy or insolvency, or for safety reasons. Additionally, Novartis may terminate the Novartis Agreement for convenience at any time after March 19, 2018 upon 180 days' notice. Certain termination events are subject to a continuing license and a technology transfer.

Novartis Stock Purchase

Concurrent with the entry into the Novartis Agreement, we and Novartis Institutes for BioMedical Research, Inc., or NIBR, entered into a stock purchase agreement to purchase 2,361,029 shares of our Series E Preferred Stock (or 1,699,940 shares of common stock on an as-converted basis), representing 2.7% of our then-outstanding equity and convertible securities, for $25.0 million. Under the stock purchase agreement, NIBR is committed to purchase an additional $25.0 million of our common stock concurrent with the completion of this offering at the initial price per share offered to the public. If this offering is not completed by December 15, 2015, NIBR will purchase 2,361,029 shares of our Series E Preferred Stock (or 1,699,940 shares of common stock on an as-converted basis) for $25.0 million.

Our Research and Development and License Agreements

Listeria-*Based Agreements*

JHU Listeria *Agreement*

In March 2011, we entered into a license agreement with JHU pursuant to which we received an exclusive, worldwide, sublicensable license to certain patent rights covering the tumor-associated antigen mesothelin to make, use, import and commercialize products and to provide services for all bacteria-based therapeutic and/or prophylactic uses for cancer treatment and/or prevention and as a companion diagnostic. Under the agreement, or the JHU *Listeria* Agreement, we are obligated to use commercially reasonable efforts to develop and market licensed products and services, which can be demonstrated by achieving specified development milestones by specified dates.

Under the JHU *Listeria* Agreement, we paid an upfront fee of $25,000 in 2011 and a milestone payment of $25,000 in 2012 and are required to make future milestone payments totaling up to $375,000 upon achievement of certain regulatory milestones. Under the JHU *Listeria* Agreement, we are obligated to pay JHU royalties based on net sales of licensed products and services by us, our affiliates and our sublicensees at a rate in the low-single digits, subject to minimum annual royalties, and a percentage of consideration received from any sublicensing arrangements ranging from the low-single digits to the low twenties depending on the field of use and the stage of development of the product candidate at the time the sublicense is granted.

The JHU *Listeria* Agreement will continue in effect on a country-by-country basis until the expiration of the last patent within the licensed patent rights or if no patents issue then for 20 years from the effective date of the agreement. Either party may terminate the JHU *Listeria* Agreement for the other party's uncured breach of the agreement upon 30 days' prior notice or for the other party's insolvency. Additionally, we may terminate the JHU *Listeria* Agreement at will upon 90 days' prior written notice to JHU.

UCB Listeria *Agreement*

In March 2012, we entered into a license agreement with the Regents of the University of California on behalf of its Berkeley campus, or UCB, granting us an exclusive, worldwide, sublicensable license to certain patent rights covering the use of the *Listeria monocytogenes* phage integration vector which accelerates the genetic engineering of *Listeria* to express more than one antigen to make, use, import and commercialize products and to provide services for all fields of use. Under this agreement, or the UCB *Listeria* Agreement, we are obligated to use commercially reasonable efforts to develop, manufacture and sell licensed products and services and we are obligated to achieve specified development and regulatory milestones by specified dates.

Under the UCB *Listeria* Agreement, we paid UCB an upfront fee of $25,000 in 2012 and a milestone payment of $25,000 in 2013 and are required to make future milestone payments totaling up to $350,000 upon achievement of certain development and regulatory milestones. We are required to pay an annual license maintenance fee until our first sale of a product covered by the licensed patent rights. Under the UCB *Listeria* Agreement, we are obligated to pay UCB royalties based on net sales of licensed products and services sold by us and our sublicensees at a rate in the low single digits, subject to minimum annual royalties and customary reductions, and a percentage of certain of our sublicensing revenues ranging from the low-single digits to the low thirties depending on how the product covered by the licensed patent rights is used.

The UCB *Listeria* Agreement will last until the expiration of the last patent within the licensed patent rights. UCB may terminate the agreement for our uncured material breach upon 90 days' prior written notice and we may terminate the agreement at will upon 90 days' prior written notice to UCB.

GVAX-Based Agreements

ANI Agreement

In January 2013, we entered into an asset purchase agreement with BioSante Pharmaceuticals, Inc., which subsequently merged with and into ANI Pharmaceuticals, Inc., or ANI, in June 2013. Under the agreement, or the ANI Agreement, we purchased all the rights, title and interest of ANI in and to all of the assets related to or comprising GVAX product candidates and any assets necessary or reasonably useful to make, have made, use, have used, sell, offer for sale, have sold, import, have imported, develop, have developed, commercialize and have commercialized GVAX products.

Under the ANI Agreement, we paid ANI cash consideration of $1.0 million and will be required to make royalty payments on net sales of GVAX products sold by us, our affiliates and our sublicensees for the treatment of certain cancers, which are covered by purchased intellectual property rights or developed using purchased technology, at rates in the low-single digits. We are also required to pay milestone payments of up to $4.0 million for GVAX pancreas or prostate products in combination with *Listeria* or up to $12.0 million per product for other GVAX products upon the achievement of certain sales milestones. We are obligated to make royalty payments on a product-by-product and country-by-country basis until the later of (i) the expiration of the last to expire of the purchased patent rights covering the GVAX product or the regulatory exclusivity period and (ii) up to seven years from the first commercial sale of the product in such country depending on the level of net sales in such country after the expiration of the patent or regulatory exclusivity period. The royalties and milestone payments for GVAX products for the treatment of pancreas and prostate cancer, as well as the royalties and milestone payments for other cancer products, are each capped at specified maximum amounts. To the extent we enter into a sublicensing agreement relating to the GVAX pancreas or prostate cancer products in combination with *Listeria*, we are required to pay ANI a percentage of our sublicensing income, ranging from the low teens to the low thirties based on the indication, the stage of development of the GVAX products at the time the sublicense is granted and the amount of development costs expended by us at the time the sublicense is granted. The sublicensing payments owed under this ANI Agreement for pancreas and prostate cancer in combination with *Listeria* are each capped at specified maximum amounts.

JHU GVAX Agreement

In January 2013, we entered into a license agreement with JHU granting us an exclusive, worldwide, sublicensable license under certain GVAX-related patent rights and cell lines, and a non-exclusive, worldwide, sublicensable license to related know-how, in each case to make, have made, use, have used, sell, offer for sale, have sold, import, have imported, develop and commercialize products and services using or incorporating licensed patent rights, cell lines or know-how for any use. Under the agreement, or the New License Agreement, we are obligated to use commercially reasonable efforts to develop and market licensed products and services, including using commercially reasonable efforts to achieve specified development milestones by specified dates.

Under the New License Agreement, we paid upfront fees of $125,000 in February 2013 and $125,000 in February 2014. Under the New License Agreement, we are also required to pay JHU development and regulatory milestone payments totaling up to approximately $1.1 million for STINGVAX, a GVAX product with CDNs, approximately $1.2 million for TEGVAX, a GVAX product with TLRs, and approximately $1.2 million for other licensed products. We are also required to pay JHU royalties based on net sales of licensed products and services by us, our affiliates and our sublicensees at a rate in the low single digits, subject to minimum annual royalties and standard reductions upon expiration of patent coverage and for licenses to third-party intellectual property rights, as well as a percentage of certain consideration received in consideration of the grant of sublicenses under this agreement ranging from the low tens to the mid-twenties depending on the stage of development of the product candidate at the time the sublicense is granted and the number of sublicenses granted.

The New License Agreement will continue in effect on a product-by-product basis and service-by-service basis until 30 years after the first commercial sale of such product or service, provided that the term may be extended for additional 10-year periods upon mutual agreement of the parties. Either party may terminate the New License Agreement for the other party's uncured material breach of the agreement upon 60 days' prior notice to the breaching party, or 30 days' notice if such breach relates to a payment obligation, or for the other party's insolvency. Additionally, we may terminate the New License Agreement at will upon 90 days' prior written notice to JHU.

GVAX RALA

In January 2013, as a result of entering into the ANI Agreement, we were assigned the March 2011 Restated and Amended License Agreement, or the RALA, by and between JHU and BioSante Pharmaceuticals, Inc. Under the RALA, we were granted a worldwide license, sublicensable under certain conditions, under certain patent rights to make, have made, use, import and sell licensed products and to provide licensed services for any use. Such licensed patents include patents covering the cell lines used in the GVAX Pancreas product candidate. Pursuant to the agreement, we must use reasonable commercial efforts to develop and commercialize licensed products and meet certain specified milestones.

Under the RALA, we are required to pay JHU an annual license fee as well as milestone payments totaling up to $300,000 upon the occurrence of certain development, regulatory, and patent-related milestones. We are also required to pay JHU royalties based on net sales of licensed products and services by us, our affiliates and our sublicensees at a rate in the low single digits, as well as a percentage of amounts received in consideration for sublicenses under the agreement in the mid-teens.

The RALA will expire on a country-by-country basis upon the expiration of the last to expire patent within the licensed patent rights or if no patent issues, then 20 years from the effective date of the agreement. Either party may terminate the agreement for the other party's uncured breach of the agreement upon 60 days' prior written notice. We may terminate the agreement upon 60 days' prior written notice.

CDN-Based Agreements

Karagen Agreement

In June 2012, we entered into a license agreement with Karagen Pharmaceuticals, Inc., or Karagen, pursuant to which Karagen granted us an exclusive, worldwide, sublicenseable license under certain patents and know-how related to CDNs to make, develop, use and commercialize products for use in the therapeutic and/or prophylactic treatment of cancer or precancerous conditions and a non-exclusive license to such patents and know-how to make, develop, use and commercialize products for all other uses. Under the agreement, or the Karagen Agreement, we were also granted an option to designate a particular disease or condition to be added to the field of use under our exclusive license. Under the Karagen Agreement, we are obligated to use commercially reasonable efforts to develop and commercialize licensed products in the United States and the European Union.

Under the Karagen Agreement, we paid Karagen an upfront fee of $75,000 in 2012 and are required to make milestone payments totaling up to $900,000, in the aggregate, for the achievement of specified development and regulatory milestones as well as royalties based on net sales of products by us, our affiliates and sublicensees at rates ranging in the low single-digit percentages, determined by whether the disease field is an exclusive or non-exclusive disease field, subject to minimum annual royalties and standard reductions. In addition, we are required to pay Karagen a percentage of consideration received from any sublicensing arrangements ranging from the mid-single digits to the mid-teen digits determined by the current stage of development of the relevant licensed product at the time of the sublicense grant, or by whether we have exercised our option to add a designated field of use to its exclusive license, as applicable.

The Karagen Agreement will expire, on a country-by-country basis, upon the expiration of the last-to-expire valid claim within the licensed patent rights. Either party may terminate the Karagen Agreement upon 90 days' advance written notice in the event of the other party's material breach that is not cured within such 90-day period, and immediately upon notice in the event of the other party's bankruptcy or insolvency. Additionally, we may terminate the Karagen Agreement at will upon 90 days' advance written notice to Karagen.

UCB Vance Agreement

In September 2014, we entered into a license agreement with UCB, granting us an exclusive, worldwide sublicenseable license under certain patent rights covering the use of the CDN molecules that activate the STING receptor to make, develop, use and commercialize products, to practice methods and to offer services, in each case that are covered by the licensed patent rights, in all fields of use. Under this agreement, or the UCB Vance Agreement, we are obligated to use commercially reasonable efforts to develop, manufacture and sell licensed products and services and are obligated to achieve specified development and regulatory milestones by specified dates.

Under the UCB Vance Agreement, we paid UCB an upfront fee of $50,000 in 2014 and are required to make future milestone payments totaling up to $1.5 million, in the aggregate, upon our achievement of certain specified development and regulatory milestones for the first indication and up to $250,000 upon our achievement of a specified development and regulatory milestone for each additional indication developed. Under the UCB Vance Agreement, we are obligated to pay UCB royalties based on net sales of licensed products and services sold by us and our sublicensees at a rate in the low single-digit percentages, subject to minimum annual royalties and customary reductions, and a percentage of consideration received from any sublicensing arrangements at rates ranging from the low-single digits to the low thirties, determined by the current stage of development of the relevant licensed product at the time the sublicense is granted.

The UCB Vance Agreement will continue in effect until the expiration of the last-to-expire valid claim within the licensed patent rights. UCB may terminate the agreement upon 90 days' advance written notice in the event of our material breach that is not cured within such 90-day period. We may terminate the agreement at will upon 90 days' advance written notice. UCB may the terminate agreement upon 90 days' advance written notice in the event we challenge the validity or unenforceability of any licensed patent.

MSK Agreement

In December 2014, we entered into a license agreement with Memorial Sloan Kettering Cancer Center, or MSK, The Rockefeller University, Rutgers, The State University of New Jersey, and University of Bonn, collectively the Licensors, pursuant to which we received an exclusive, worldwide, sublicensable license under certain patents related to CDNs and a non-exclusive, worldwide, sublicensable license under specified know-how, in each case to develop, make, have made, use, have used, import, sell, and otherwise commercialize licensed products for use in therapeutic and/or prophylactic treatments in humans. Under the agreement, or the MSK Agreement, we are obligated to use commercially reasonable efforts to develop and commercialize a licensed product, including achieving specified development and regulatory milestones by specified dates.

Under the MSK Agreement, we paid MSK upfront fees of $50,000 in January 2015. We are required to pay MSK development and regulatory milestone payments totaling up to $375,000 for each licensed product and commercialization milestone payments totaling up to $2,950,000 for each licensed product. We are also required to pay MSK royalties based on net sales of licensed products by us and our sublicensees at a rate ranging in the low single digits depending on whether the licensed product is covered by a valid claim of the licensed patents, subject to minimum annual royalties. Our royalty obligation to MSK continues on a country-by-country basis until the later of the expiration of the last patent right covering the licensed product in such country or 10 years from the first commercial sale in such country. We are also obligated to pay MSK a percentage of certain consideration received for the grant of sublicenses, ranging from ten to the mid-twenties.

The MSK Agreement will continue in effect until the expiration of our royalty obligations. Either party may terminate the MSK Agreement upon the other party's uncured material breach that is not cured within 90 days after the breaching party receives notice of such breach. Additionally, the Licensors may terminate the MSK Agreement for our bankruptcy or insolvency or if we fail to pay any undisputed amounts owed under the agreement and do not cure such failure within 30 days after receiving notice of such failure.

Competition

The biotechnology and pharmaceutical industries, and the immuno-oncology subsector, are characterized by rapid evolution of technologies, fierce competition and strong defense of intellectual property. A wide variety of institutions, including large pharmaceutical companies, specialty biotechnology companies, academic research departments and public and private research institutions, are actively developing potentially competitive products and technologies. We face substantial competition from biotechnology and pharmaceutical companies developing products in immuno-oncology and in our lead indications. They generally fall within the following categories:

- diversified immuno-oncology: AstraZeneca PLC, Bristol-Myers Squibb Company, GlaxoSmithKline plc, Merck & Co., Inc., Novartis AG, Pfizer Inc., Roche Holding Ltd and Sanofi SA;
- immuno-oncology aimed at stimulating immune response: AdaptImmune LLC, Idera Pharmaceuticals, Inc., Immune Design Corp. and NewLink Genetic Corporation;
- *Listeria*-based technology: Advaxis, Inc.;
- pancreatic cancer: Celgene Corporation, Incyte Corporation and Merrimack Pharmaceuticals, Inc.; and
- mesothelioma: Verastem, Inc.

While we believe that our product candidates, technology, knowledge and experience provide us with competitive advantages, we face competition from established and emerging pharmaceutical and biotechnology companies, among others. Any product candidates that we successfully develop and commercialize will compete with existing and new therapies that may become available in the future. The availability of reimbursement from government and other third-party payors will also significantly affect the pricing and competitiveness of our products.

Many of our competitors, either alone or with strategic partners, have substantially greater financial, technical and human resources than we do. Accordingly, our competitors may be more successful than us in obtaining approval for treatments and achieving widespread market acceptance, rendering our treatments obsolete or non-competitive. Accelerated mergers and acquisitions activity in the biotechnology and pharmaceutical industries may result in even more resources being concentrated among a smaller number of our competitors. These companies also compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical study sites and patient registration for clinical studies and acquiring

technologies complementary to, or necessary for, our programs. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

Our commercial opportunity could be substantially limited in the event that our competitors develop and commercialize products that are more effective, safer, less toxic, more convenient or cheaper than our comparable products. In geographies that are critical to our commercial success, competitors may also obtain regulatory approvals before us, resulting in our competitors building a strong market position in advance of our product's entry. We believe the factors determining the success of our programs will be the efficacy, safety and convenience of our product candidates.

Government Regulation and Product Approval

As a biopharmaceutical company that operates in the United States, we are subject to extensive regulation. Federal, state and local government authorities in the United States and in other countries extensively regulate, among other things, the research, development, testing, manufacturing, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, post-approval monitoring and reporting, marketing and export and import of biological and pharmaceutical products such as those we are developing. Our product candidates must be approved by the FDA before they may be legally marketed in the United States and by the appropriate foreign regulatory agency before they may be legally marketed in foreign countries. Generally, our activities in other countries will be subject to regulation that is similar in nature and scope as that imposed in the United States, although there can be important differences. Additionally, some significant aspects of regulation in Europe are addressed in a centralized way, but country-specific regulation remains essential in many respects. The process for obtaining regulatory marketing approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources.

U.S. Product Development Process

In the United States, the FDA regulates pharmaceutical and biological products under the Federal Food, Drug and Cosmetic Act, or FDCA, and the Public Health Service Act, or PHSA, and the FDA's implementing regulations. Products are also subject to other federal, state and local statutes and regulations. The process of obtaining regulatory approvals and the subsequent compliance with appropriate federal, state, local and foreign statutes and regulations require the expenditure of substantial time and financial resources. Failure to comply with the applicable U.S. requirements at any time during the product development process, approval process or after approval, may subject an applicant to administrative or judicial sanctions. FDA sanctions could include, among other actions, refusal to approve pending applications, withdrawal of an approval, a clinical hold, warning letters, product recalls or withdrawals from the market, product seizures, total or partial suspension of production or distribution injunctions, fines, refusals of government contracts, restitution, disgorgement or civil or criminal penalties. Any agency or judicial enforcement action could have a material adverse effect on us. The FDA has limited experience with commercial development of combination immuno-oncology products. The process required by the FDA before a drug or biological product may be marketed in the United States generally involves the following:

- completion of nonclinical laboratory tests and animal studies according to good laboratory practices, or GLPs, and applicable requirements for the humane use of laboratory animals or other applicable regulations;

- submission to the FDA of an Investigational New Drug Application, or IND, which must become effective before human clinical trials may begin;

- performance of adequate and well-controlled human clinical trials according to the FDA's regulations commonly referred to as good clinical practices, or GCPs, and any additional

requirements for the protection of human research patients and their health information, to establish the safety and efficacy of the product candidate for its intended use;

- submission to the FDA of a BLA for any biologic or an NDA for any drug we seek to market that includes substantive evidence of safety, purity, and potency, or safety and effectiveness from results of nonclinical testing and clinical trials;

- satisfactory completion of an FDA inspection of the manufacturing facility or facilities where the product is produced, to assess compliance with cGMP, to assure that the facilities, methods and controls are adequate to preserve the product's identity, strength, quality and purity, and, if applicable, the FDA's current good tissue practices, or GTPs, for the use of human cellular and tissue products;

- potential FDA audit of the nonclinical study and clinical trial sites that generated the data in support of the BLA or NDA; and

- FDA review and approval of the NDA, or licensure, of the BLA.

Before testing any product candidate in humans, the product candidate enters the preclinical testing stage. Preclinical tests, also referred to as nonclinical studies, include laboratory evaluations of product chemistry, toxicity and formulation, as well as animal studies to assess the potential safety and activity of the product candidate. The conduct of the preclinical tests must comply with federal regulations and requirements including GLPs. The clinical trial sponsor must submit the results of the preclinical tests, together with manufacturing information, analytical data, any available clinical data or literature and a proposed clinical protocol, to the FDA as part of the IND. Some preclinical testing may continue even after the IND is submitted. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA raises concerns or questions regarding the proposed clinical trials and places the trial on a clinical hold within that 30-day time period. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. The FDA may also impose clinical holds on a product candidate at any time before or during clinical trials due to safety concerns or non-compliance. If the FDA imposes a clinical hold, trials may not recommence without FDA authorization and then only under terms authorized by the FDA. Accordingly, we cannot be sure that submission of an IND will result in the FDA allowing clinical trials to begin, or that, once begun, issues will not arise that suspend or terminate such trials.

Where a recombinant nucleic acid trial is conducted at, or sponsored by, institutions receiving funding for recombinant DNA research from the U.S. National Institutes of Health, or NIH, prior to the submission of an IND to the FDA, a protocol and related documentation is submitted to and the study is registered with the NIH Office of Biotechnology Activities, or OBA, pursuant to the NIH Guidelines for Research Involving Recombinant DNA Molecules, or NIH Guidelines. Compliance with the NIH Guidelines is mandatory for investigators at institutions receiving NIH funds for research involving recombinant DNA, however many companies and other institutions not otherwise subject to the NIH Guidelines voluntarily follow them. The NIH is responsible for convening the Recombinant DNA Advisory Committee, or RAC, a federal advisory committee, which discusses protocols that raise novel or particularly important scientific, safety or ethical considerations at one of its quarterly public meetings. The OBA will notify the FDA of the RAC's decision regarding the necessity for full public review of a protocol. RAC proceedings and reports are posted to the OBA web site and may be accessed by the public.

Clinical trials involve the administration of the product candidate to healthy volunteers or patients under the supervision of qualified investigators, generally physicians not employed by or under the trial sponsor's control. Clinical trials are conducted under protocols detailing, among other things, the objectives of the clinical trial, dosing procedures, subject selection and exclusion criteria, and the parameters to be used to monitor subject safety, including stopping rules that assure a clinical trial will be stopped if certain adverse events should occur. Each protocol and any amendments to the protocol must be submitted to the FDA as part of the IND. Clinical trials must be conducted and monitored in accordance with the FDA's regulations composing the GCP

requirements, including the requirement that all research patients provide informed consent. Further, each clinical trial must be reviewed and approved by an independent institutional review board, or IRB, at or servicing each institution at which the clinical trial will be conducted. An IRB is charged with protecting the welfare and rights of trial participants and considers such items as whether the risks to individuals participating in the clinical trials are minimized and are reasonable in relation to anticipated benefits. The IRB also approves the form and content of the informed consent that must be signed by each clinical trial subject or his or her legal representative and must monitor the clinical trial until completed. Clinical trials of certain biologics also must be reviewed by an institutional biosafety committee, or IBC, a local institutional committee that reviews and oversees basic and clinical research conducted at that institution. The IBC assesses the safety of the research and identifies any potential risk to public health or the environment.

Human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- Phase 1. The biological product is initially introduced into healthy human patients and tested for safety. In the case of some products for severe or life-threatening diseases, especially when the product may be too inherently toxic to ethically administer to healthy volunteers, the initial human testing is often conducted in patients.

- Phase 2. The biological product is evaluated in a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases and to determine dosage tolerance, optimal dosage and dosing schedule.

- Phase 3. Clinical trials are undertaken to further evaluate dosage, clinical efficacy, potency, and safety in an expanded patient population at geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall risk to benefit ratio of the product and provide an adequate basis for product labeling.

Post-approval clinical trials, sometimes referred to as Phase 4 clinical trials, may be conducted after initial marketing approval. These clinical trials are used to gain additional experience from the treatment of patients in the intended therapeutic indication, particularly for long-term safety follow-up.

During all phases of clinical development, regulatory agencies require extensive monitoring and auditing of all clinical activities, clinical data, and clinical trial investigators. Annual progress reports detailing the results of the clinical trials must be submitted to the FDA. Written IND safety reports must be promptly submitted to the FDA, the NIH and the investigators for serious and unexpected adverse events, any findings from other studies, tests in laboratory animals or in vitro testing that suggest a significant risk for human patients, or any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator brochure. The sponsor must submit an IND safety report within 15 calendar days after the sponsor determines that the information qualifies for reporting. The sponsor also must notify the FDA of any unexpected fatal or life-threatening suspected adverse reaction within seven calendar days after the sponsor's initial receipt of the information. Phase 1, Phase 2 and Phase 3 clinical trials may not be completed successfully within any specified period, if at all. The FDA or the sponsor or its data safety monitoring board may suspend or terminate a clinical trial at any time on various grounds, including a finding that the research patients are being exposed to an unacceptable health risk, including risks inferred from other unrelated immuno-oncology trials. Similarly, an IRB can suspend or terminate approval of a clinical trial at its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the biological product has been associated with unexpected serious harm to patients.

Human immuno-oncology products are a new category of therapeutics. Because this is a relatively new and expanding area of novel therapeutic interventions, there can be no assurance as to the length of the trial period, the number of patients the FDA will require to be enrolled in the trials in order to establish the safety, efficacy, purity and potency of immuno-oncology products, or that the data generated in these trials will be acceptable to the FDA to support marketing approval.

Concurrently with clinical trials, companies usually complete additional studies and must also develop additional information about the physical characteristics of the product candidate as well as finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. To help reduce the risk of the introduction of adventitious agents with use of biological products, the PHSA emphasizes the importance of manufacturing control for products whose attributes cannot be precisely defined. The manufacturing process must be capable of consistently producing quality batches of the product candidate and, among other criteria, the sponsor must develop methods for testing the identity, strength, quality, potency and purity of the final biological product. Additionally, appropriate packaging must be selected and tested, and stability studies must be conducted to demonstrate that the biological product candidate does not undergo unacceptable deterioration over its shelf life.

U.S. Review and Approval Processes

After the completion of clinical trials of a product candidate, FDA approval of a BLA or NDA must be obtained before commercial marketing of the product. The BLA or NDA must include results of product development, laboratory and animal studies, human trials, information on the manufacture and composition of the product, proposed labeling and other relevant information. The FDA may grant deferrals for submission of data, or full or partial waivers. The testing and approval processes require substantial time and effort and there can be no assurance that the FDA will accept the BLA or NDA for filing and, even if filed, that any approval will be granted on a timely basis, if at all.

Under the Prescription Drug User Fee Act, or PDUFA, as amended, each BLA or NDA must be accompanied by a significant user fee. The FDA adjusts the PDUFA user fees on an annual basis. PDUFA also imposes an annual product fee for products and an annual establishment fee on facilities used to manufacture prescription biological or drug products. Fee waivers or reductions are available in certain circumstances, including a waiver of the application fee for the first application filed by a small business. Additionally, no user fees are assessed on BLAs or NDAs for products designated as orphan drugs, unless the product also includes a non-orphan indication.

Within 60 days following submission of the application, the FDA reviews a BLA or NDA submitted to determine if it is substantially complete before the agency accepts it for filing. The FDA may refuse to file any BLA or NDA that it deems incomplete or not properly reviewable at the time of submission, and may request additional information. In this event, the BLA or NDA must be resubmitted with the additional information. The resubmitted application also is subject to review before the FDA accepts it for filing. Once the submission is accepted for filing, the FDA begins an in-depth substantive review of the BLA or NDA. The FDA reviews the BLA to determine, among other things, whether the proposed product is safe, potent, and/or effective for its intended use, and has an acceptable purity profile, and in the case of an NDA, whether the product is safe and effective for its intended use, and in each case, whether the product is being manufactured in accordance with cGMP. The FDA may refer applications for novel biological or drug products or biological or drug products that present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved and under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions. During the product approval process, the FDA also will determine whether a Risk Evaluation and Mitigation Strategy, or REMS, is necessary to assure the safe use of the product. If the FDA concludes a REMS is needed, the sponsor of the BLA or NDA must submit a proposed REMS. The FDA will not approve a BLA or NDA without a REMS, if required.

Before approving a BLA or NDA, the FDA will inspect the facilities at which the product is manufactured. The FDA will not approve the product unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. For human tissue-based products, the FDA also will not approve the product if the manufacturer is not in compliance with the FDA's current good tissue practices, or GTPs, to the extent applicable. These are FDA regulations and guidance documents that govern the methods used in, and the

facilities and controls used for, the manufacture of human cells, tissues, and cellular and tissue based products, or HCT/Ps, which are human cells or tissue intended for implantation, transplant, infusion, or transfer into a human recipient. The primary intent of the GTP requirements is to ensure that cell and tissue based products are manufactured in a manner designed to prevent the introduction, transmission and spread of communicable disease. FDA regulations also require tissue establishments to register and list their HCT/Ps with the FDA and, when applicable, to evaluate donors through screening and testing. Additionally, before approving a BLA or NDA, the FDA will typically inspect one or more clinical sites to assure that the clinical trials were conducted in compliance with IND trial requirements and GCP requirements. To assure cGMP, GTP and GCP compliance, an applicant must incur significant expenditure of time, money and effort in the areas of training, record keeping, production and quality control.

Notwithstanding the submission of relevant data and information, the FDA may ultimately decide that the BLA or NDA does not satisfy its regulatory criteria for approval and deny approval. Data obtained from clinical trials are not always conclusive and the FDA may interpret data differently than we interpret the same data. If the agency decides not to approve the BLA or NDA in its present form, the FDA will issue a complete response letter that describes all of the specific deficiencies in the BLA or NDA identified by the FDA. The deficiencies identified may be minor, for example, requiring labeling changes, or major, for example, requiring additional clinical trials. Additionally, the complete response letter may include recommended actions that the applicant might take to place the application in a condition for approval. If a complete response letter is issued, the applicant may either resubmit the BLA or NDA, addressing all of the deficiencies identified in the letter, or withdraw the application.

If a product receives regulatory approval, the approval may be significantly limited to specific indications and dosages or the indications for use may otherwise be limited, which could restrict the commercial value of the product.

Further, the FDA may require that certain contraindications, warnings or precautions be included in the product labeling. The FDA may impose restrictions and conditions on product distribution, prescribing, or dispensing in the form of a risk management plan, or otherwise limit the scope of any approval. In addition, the FDA may require post marketing clinical trials, sometimes referred to as Phase 4 clinical trials, designed to further assess a biological product’s safety and effectiveness, and testing and surveillance programs to monitor the safety of approved products that have been commercialized.

In addition, under the Pediatric Research Equity Act, or PREA, a BLA or supplement to a BLA must contain data to assess the safety and effectiveness of the product for the claimed indications in all relevant pediatric subpopulations and to support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The FDA may grant deferrals for submission of data or full or partial waivers. Unless otherwise required by regulation, PREA does not apply to any product for an indication for which orphan designation has been granted. However, if only one indication for a product has orphan designation, a pediatric assessment may still be required for any applications to market that same product for the non-orphan indication(s).

Orphan Drug Designation

Under the Orphan Drug Act, the FDA may grant orphan designation to a drug or biologic intended to treat a rare disease or condition, which is generally a disease or condition that affects fewer than 200,000 individuals in the United States, or more than 200,000 individuals in the United States and for which there is no reasonable expectation that the cost of developing and making available in the United States a drug or biologic for this type of disease or condition will be recovered from sales in the United States for that drug or biologic. Orphan drug designation must be requested before submitting a BLA. After the FDA grants orphan drug designation, the generic identity of the therapeutic agent and its potential orphan use are disclosed publicly by the FDA. The orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review or approval process.

If a product that has orphan drug designation subsequently receives the first FDA approval for the disease for which it has such designation, the product is entitled to orphan product exclusivity, which means that the FDA may not approve any other applications, including a full BLA, to market the same biologic for the same indication for seven years, except in limited circumstances, such as a showing of clinical superiority to the product with orphan drug exclusivity. Orphan drug exclusivity does not prevent FDA from approving a different drug or biologic for the same disease or condition, or the same drug or biologic for a different disease or condition. Among the other benefits of orphan drug designation are tax credits for certain research and a waiver of the BLA application user fee.

A designated orphan drug may not receive orphan drug exclusivity if it is approved for a use that is broader than the indication for which it received orphan designation. In addition, exclusive marketing rights in the United States may be lost if the FDA later determines that the request for designation was materially defective or if the manufacturer is unable to assure sufficient quantities of the product to meet the needs of patients with the rare disease or condition.

We have received orphan drug designation for CRS-207 and GVAX Pancreas for the treatment of pancreatic cancer and CRS-207 for the treatment of mesothelioma. There can be no assurance that we will receive orphan drug designation for additional indications or for any additional product candidates.

Expedited Development and Review Programs

The FDA has a Fast Track program that is intended to expedite or facilitate the process for reviewing new products that meet certain criteria. Specifically, new products are eligible for Fast Track designation if they are intended to treat a serious or life-threatening disease or condition and demonstrate the potential to address unmet medical needs for the disease or condition. Fast Track designation applies to the combination of the product and the specific indication for which it is being studied. Unique to a Fast Track product, the FDA may consider for review sections of the BLA or NDA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the BLA or NDA, the FDA agrees to accept sections of the BLA or NDA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the BLA or NDA.

Any product, submitted to the FDA for approval, including a product with a Fast Track designation, may also be eligible for other types of FDA programs intended to expedite development and review, such as priority review and accelerated approval. A product is eligible for priority review if it has the potential to provide safe and effective therapy where no satisfactory alternative therapy exists or a significant improvement in the treatment, diagnosis or prevention of a disease compared to marketed products. The FDA will attempt to direct additional resources to the evaluation of an application for a new product designated for priority review in an effort to facilitate the review. Additionally, a product may be eligible for accelerated approval. Products studied for their safety and effectiveness in treating serious or life-threatening diseases or conditions may receive accelerated approval upon a determination that the product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. As a condition of approval, the FDA may require that a sponsor of a drug or biological product receiving accelerated approval perform adequate and well-controlled post-marketing clinical studies. In addition, the FDA currently requires as a condition for accelerated approval pre-approval of promotional materials, which could adversely impact the timing of the commercial launch of the product. Fast Track designation, priority review and accelerated approval do not change the standards for approval but may expedite the development or approval process.

In 2012 the FDA established a Breakthrough Therapy designation which is intended to expedite the development and review of products that treat serious or life-threatening conditions. The designation is available for product candidates that are intended, alone or in combination with one or more other products, to treat serious

or life-threatening diseases or conditions and for which preliminary clinical evidence indicates that the product may demonstrate substantial improvement over currently available therapy on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. The designation includes all of the Fast Track program features, as well as more intensive FDA interaction and guidance. The Breakthrough Therapy designation is a distinct status from both Fast Track designation and priority review, which can also be granted to the same product if relevant criteria are met. If a product is designated as Breakthrough Therapy, FDA will expedite the development and review of such product.

We received Breakthrough Therapy designation for the combination of CRS-207 and GVAX Pancreas. Where applicable, we plan to request Fast Track and Breakthrough Therapy designation for other product candidates and regimens. Even if we receive one or both of these designations for our product candidates, the FDA may later decide that our product candidates no longer meets the conditions for qualification. In addition, these designations may not provide us with a material commercial advantage.

Post-Approval Requirements

Any products for which we receive FDA approvals are subject to continuing regulation by the FDA, including, among other things, record-keeping requirements, reporting of adverse experiences with the product, providing the FDA with updated safety and efficacy information, product sampling and distribution requirements, and complying with FDA promotion and advertising requirements, which include, among others, standards for direct-to-consumer advertising, restrictions on promoting products for uses or in patient populations that are not described in the product's approved uses, known as off-label use, limitations on industry-sponsored scientific and educational activities and requirements for promotional activities involving the internet. Although physicians may prescribe legally available products for off-label uses, if the physicians deem to be appropriate in their professional medical judgment, manufacturers may not market or promote such off-label uses.

In addition, quality control and manufacturing procedures must continue to conform to applicable manufacturing requirements after approval to ensure the long-term stability of the product. We rely, and expect to continue to rely, on third parties for the production of clinical and commercial quantities of our products in accordance with cGMP regulations. cGMP regulations require among other things, quality control and quality assurance as well as the corresponding maintenance of records and documentation and the obligation to investigate and correct any deviations from cGMP. Manufacturers and other entities involved in the manufacture and distribution of approved products are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMP and other laws. Accordingly, manufacturers must continue to expend time, money, and effort in the area of production and quality control to maintain cGMP compliance. Discovery of problems with a product after approval may result in restrictions on a product, manufacturer, or holder of an approved BLA or NDA, including, among other things, recall or withdrawal of the product from the market. In addition, changes to the manufacturing process are strictly regulated, and depending on the significance of the change, may require prior FDA approval before being implemented. Other types of changes to the approved product, such as adding new indications and claims, are also subject to further FDA review and approval.

The FDA also may require post-marketing testing, known as Phase 4 testing, and surveillance to monitor the effects of an approved product. Discovery of previously unknown problems with a product or the failure to comply with applicable FDA requirements can have negative consequences, including adverse publicity, judicial or administrative enforcement, warning letters from the FDA, mandated corrective advertising or communications with doctors, and civil or criminal penalties, among others. Newly discovered or developed safety or effectiveness data may require changes to a product's approved labeling, including the addition of new warnings and contraindications, and also may require the implementation of other risk management measures. Also, new government requirements, including those resulting from new legislation, may be established, or the FDA's policies may change, which could delay or prevent regulatory approval of our products under development.

U.S. Patent Term Restoration and Marketing Exclusivity

The Biologics Price Competition and Innovation Act, or BPCIA, amended the PHSA to authorize the FDA to approve similar versions of innovative biologics, commonly known as biosimilars. A competitor seeking approval of a biosimilar must file an application to establish its molecule as highly similar to an approved innovator biologic, among other requirements. The BPCIA, however, bars the FDA from approving biosimilar applications for 12 years after an innovator biological product receives initial marketing approval.

Depending upon the timing, duration and specifics of the FDA approval of the use of our product candidates, some of our U.S. patents, if granted, may be eligible for limited patent term extension under the Drug Price Competition and Patent Term Restoration Act of 1984, commonly referred to as the Hatch-Waxman Act. The Hatch-Waxman Act permits a patent restoration term of up to five years, as compensation for patent term lost during product development and the FDA regulatory review process. However, patent term restoration cannot extend the remaining term of a patent beyond a total of 14 years from the product's approval date. The patent term restoration period is generally one-half the time between the effective date of an IND and the submission date of a BLA or NDA plus the time between the submission date of a BLA or NDA and the approval of that application. Only one patent applicable to an approved product is eligible for the extension and the application for the extension must be submitted prior to the expiration of the patent. The U.S. Patent and Trademark Office, in consultation with the FDA, reviews and approves the application for any patent term extension or restoration. In the future, we may intend to apply for restoration of patent term for one of our currently owned or licensed patents to add patent life beyond its current expiration date, depending on the expected length of the clinical trials and other factors involved in the filing of the relevant BLA or NDA.

Pediatric exclusivity is another type of regulatory market exclusivity in the United States. Pediatric exclusivity, if granted, adds six months to existing exclusivity periods and patent terms. This six-month exclusivity, which runs from the end of other exclusivity protection or patent term, may be granted based on the voluntary completion of a pediatric trial in accordance with an FDA-issued "Written Request" for such a trial.

Other U.S. Healthcare Laws and Compliance Requirements

In the United States, our activities are potentially subject to regulation by various federal, state and local authorities in addition to the FDA, including but not limited to, the Centers for Medicare and Medicaid Services, or CMS, other divisions of the U.S. Department of Health and Human Services, for instance the Office of Inspector General, the U.S. Department of Justice, or DOJ, and individual U.S. Attorney offices within the DOJ, and state and local governments. For example, sales, marketing and scientific/educational grant programs must comply with the anti-fraud and abuse provisions of the Social Security Act, the false claims laws, the physician payment transparency laws, the privacy and security provisions of the Health Insurance Portability and Accountability Act, or HIPAA, as amended by the Health Information Technology and Clinical Health Act, or HITECH, and similar state laws, each as amended.

The federal Anti-Kickback Statute prohibits, among other things, any person or entity from knowingly and willfully offering, paying, soliciting or receiving any remuneration, directly or indirectly, overtly or covertly, in cash or in kind, to induce or in return for purchasing, leasing, ordering or arranging for the purchase, lease or order of any item or service reimbursable under Medicare, Medicaid or other federal healthcare programs. The term remuneration has been interpreted broadly to include anything of value. The Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on one hand and prescribers, purchasers, and formulary managers on the other. There are a number of statutory exceptions and regulatory safe harbors protecting some common activities from prosecution. The exceptions and safe harbors are drawn narrowly and practices that involve remuneration that may be alleged to be intended to induce prescribing, purchasing or recommending may be subject to scrutiny if they do not qualify for an exception or safe harbor. Our practices may not in all cases meet all of the criteria for protection under a statutory exception or regulatory safe harbor. Failure to meet all of the requirements of a particular applicable statutory exception or regulatory

safe harbor, however, does not make the conduct per se illegal under the Anti-Kickback Statute. Instead, the legality of the arrangement will be evaluated on a case-by-case basis based on a cumulative review of all of its facts and circumstances.

Additionally, the intent standard under the Anti-Kickback Statute was amended by the Affordable Care Act to a stricter standard such that a person or entity no longer needs to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation. In addition, the Affordable Care Act codified case law that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the federal False Claims Act, as discussed below.

The civil monetary penalties statute imposes penalties against any person or entity that, among other things, is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent.

The federal False Claims Act prohibits, among other things, any person or entity from knowingly presenting, or causing to be presented, a false claim for payment to, or approval by, the federal government or knowingly making, using, or causing to be made or used a false record or statement material to a false or fraudulent claim to the federal government. As a result of a modification made by the Fraud Enforcement and Recovery Act of 2009, a claim includes “any request or demand” for money or property presented to the U.S. government. Recently, several pharmaceutical and other healthcare companies have been prosecuted under these laws for allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. Other companies have been prosecuted for causing false claims to be submitted because of the companies’ marketing of the product for unapproved, and thus non-reimbursable, uses.

HIPAA created new federal criminal statutes that prohibit knowingly and willfully executing, or attempting to execute, a scheme to defraud or to obtain, by means of false or fraudulent pretenses, representations or promises, any money or property owned by, or under the control or custody of, any healthcare benefit program, including private third-party payors and knowingly and willfully falsifying, concealing or covering up by trick, scheme or device, a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Similar to the Anti-Kickback Statute, a person or entity does not need to have actual knowledge of the statute or specific intent to violate it in order to have committed a violation.

Also, many states have similar fraud and abuse statutes or regulations that apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor.

We may be subject to data privacy and security regulations by both the federal government and the states in which we conduct our business. HIPAA, as amended by the HITECH Act, and their respective implementing regulations, including the final omnibus rule published on January 25, 2013, imposes requirements relating to the privacy, security and transmission of individually identifiable health information. Among other things, HITECH makes HIPAA’s privacy and security standards directly applicable to business associates independent contractors or agents of covered entities that receive or obtain protected health information in connection with providing a service on behalf of a covered entity. HITECH also created four new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys’ fees and costs associated with pursuing federal civil actions. In addition, state laws govern the privacy and security of health information in specified circumstances, many of which differ from each other in significant ways, thus complicating compliance efforts.

Additionally, the federal Physician Payments Sunshine Act under the Affordable Care Act, and its implementing regulations, require that certain manufacturers of drugs, devices, biological and medical supplies for which payment is available under Medicare, Medicaid or the Children’s Health Insurance Program, with certain exceptions, to report information related to certain payments or other transfers of value made or

distributed to physicians and teaching hospitals, or to entities or individuals at the request of, or designated on behalf of, the physicians and teaching hospitals and to report annually certain ownership and investment interests held by physicians and their immediate family members and payments or other "transfers of value" made to such physician owners. Failure to submit timely, accurately, and completely the required information may result in civil monetary penalties of up to an aggregate of $150,000 per year and up to an aggregate of $1 million per year for "knowing failures"). Manufacturers were required to begin collecting data on August 1, 2013 and submit reports on aggregate payment data to the government for the first reporting period of August 1, 2013 to December 31, 2013, by March 31, 2014, and to report detailed payment data for the first reporting period and submit legal attestation to the accuracy of such data by June 30, 2014. Thereafter, manufacturers must submit reports by the 90th day of each subsequent calendar year. CMS made all reported data publicly available on September 30, 2014. Certain states also mandate implementation of compliance programs, impose restrictions on pharmaceutical manufacturer marketing practices and/or require the tracking and reporting of gifts, compensation and other remuneration to healthcare providers and entities.

In order to distribute products commercially, we must also comply with state laws that require the registration of manufacturers and wholesale distributors of drug and biological products in a state, including, in certain states, manufacturers and distributors who ship products into the state even if such manufacturers or distributors have no place of business within the state. Some states also impose requirements on manufacturers and distributors to establish the pedigree of product in the chain of distribution, including some states that require manufacturers and others to adopt new technology capable of tracking and tracing product as it moves through the distribution chain. Several states have enacted legislation requiring pharmaceutical and biotechnology companies to establish marketing compliance programs, file periodic reports with the state, make periodic public disclosures on sales, marketing, pricing, clinical trials and other activities, and/or register their sales representatives, as well as to prohibit pharmacies and other healthcare entities from providing certain physician prescribing data to pharmaceutical and biotechnology companies for use in sales and marketing and to prohibit certain other sales and marketing practices. All of our activities are potentially subject to federal and state consumer protection and unfair competition laws.

If our operations are found to be in violation of any of the federal and state healthcare laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including without limitation, civil, criminal and/or administrative penalties, damages, fines, disgorgement, exclusion from participation in government programs, such as Medicare and Medicaid, injunctions, private "qui tam" actions brought by individual whistleblowers in the name of the government, or refusal to allow us to enter into government contracts, contractual damages, reputational harm, administrative burdens, diminished profits and future earnings and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

Coverage, Pricing and Reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of any product candidates for which we obtain regulatory approval. In the United States and markets in other countries, sales of any products for which we receive regulatory approval for commercial sale will depend, in part, on the extent to that third-party payors provide coverage, and establish adequate reimbursement levels for such products. In the United States, third-party payors include federal and state healthcare programs, private managed care providers, health insurers and other organizations. The process for determining whether a third-party payor will provide coverage for a product may be separate from the process for setting the price of a product or for establishing the reimbursement rate that such a payor will pay for the product. Third-party payors may limit coverage to specific products on an approved list, also known as a formulary, which might not include all of the FDA-approved products for a particular indication. Third-party payors are increasingly challenging the price, examining the medical necessity and reviewing the cost-effectiveness of medical products, therapies and services, in addition to questioning their safety and efficacy. We may need to conduct expensive pharmaco-economic studies in order to demonstrate the medical necessity and cost-effectiveness of our products, in addition to the costs required to

obtain the FDA approvals. Our product candidates may not be considered medically necessary or cost-effective. A payor's decision to provide coverage for a product does not imply that an adequate reimbursement rate will be approved. Further, one payor's determination to provide coverage for a product does not assure that other payors will also provide coverage for the product. Adequate third-party reimbursement may not be available to enable us to maintain price levels sufficient to realize an appropriate return on our investment in product development.

Different pricing and reimbursement schemes exist in other countries. In the EU, governments influence the price of pharmaceutical products through their pricing and reimbursement rules and control of national health care systems that fund a large part of the cost of those products to consumers. Some jurisdictions operate positive and negative list systems under which products may only be marketed once a reimbursement price has been agreed. To obtain reimbursement or pricing approval, some of these countries may require the completion of clinical trials that compare the cost-effectiveness of a particular product candidate to currently available therapies. Other member states allow companies to fix their own prices for medicines, but monitor and control company profits. The downward pressure on health care costs has become very intense. As a result, increasingly high barriers are being erected to the entry of new products. In addition, in some countries, cross-border imports from low-priced markets exert a commercial pressure on pricing within a country.

The marketability of any product candidates for which we receive regulatory approval for commercial sale may suffer if the government and third-party payors fail to provide adequate coverage and reimbursement. In addition, emphasis on managed care in the United States has increased and we expect will continue to increase the pressure on healthcare pricing. Coverage policies and third-party reimbursement rates may change at any time. Even if favorable coverage and reimbursement status is attained for one or more products for which we receive regulatory approval, less favorable coverage policies and reimbursement rates may be implemented in the future.

Healthcare Reform

In March 2010, President Obama enacted the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, or collectively, the Affordable Care Act, which has the potential to substantially change healthcare financing and delivery by both governmental and private insurers, and significantly impact the pharmaceutical and biotechnology industry. The Affordable Care Act will impact existing government healthcare programs and will result in the development of new programs.

Among the Affordable Care Act's provisions of importance to the pharmaceutical and biotechnology industries, in addition to those otherwise described above, are the following:

- an annual, nondeductible fee on any entity that manufactures or imports certain specified branded prescription drugs and biologic agents apportioned among these entities according to their market share in some government healthcare programs;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program, to 23.1% and 13% of the average manufacturer price for most branded and generic drugs, respectively and capped the total rebate amount for innovator drugs at 100% of the Average Manufacturer Price, or AMP;
- addressed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for certain drugs and biologics, including our product candidates, that are inhaled, infused, instilled, implanted or injected;
- extension of manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals and by adding new mandatory eligibility

categories for individuals with income at or below 133% of the federal poverty level, thereby potentially increasing manufacturers' Medicaid rebate liability;

- a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D;

- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program; and

- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research.

Other legislative changes have been proposed and adopted in the United States since the Affordable Care Act was enacted. In August 2011, the Budget Control Act of 2011, among other things, created measures for spending reductions by Congress. A Joint Select Committee on Deficit Reduction, tasked with recommending a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, was unable to reach required goals, thereby triggering the legislation's automatic reduction to several government programs. This includes aggregate reductions of Medicare payments to providers of 2% per fiscal year, which went into effect in April 2013, and will remain in effect through 2024 unless additional Congressional action is taken. In January 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, which, among other things, further reduced Medicare payments to several providers, including hospitals and cancer treatment centers.

We anticipate that the Affordable Care Act and other legislative reforms will result in additional downward pressure on the price that we receive for any approved product, if covered, and could seriously harm our business. Any reduction in reimbursement from Medicare and other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate revenue, attain profitability, or commercialize our products. In addition, it is possible that there will be further legislation or regulation that could harm our business, financial condition and results of operations.

The Foreign Corrupt Practices Act

The Foreign Corrupt Practices Act, or FCPA, prohibits any U.S. individual or business from paying, offering, or authorizing payment or offering of anything of value, directly or indirectly, to any foreign official, political party or candidate for the purpose of influencing any act or decision of the foreign entity in order to assist the individual or business in obtaining or retaining business. The FCPA also obligates companies whose securities are listed in the United States to comply with accounting provisions requiring the company to maintain books and records that accurately and fairly reflect all transactions of the corporation, including international subsidiaries, and to devise and maintain an adequate system of internal accounting controls for international operations.

Additional Regulation

In addition to the foregoing, state and federal laws regarding environmental protection and hazardous substances, including the Occupational Safety and Health Act, the Resource Conservancy and Recovery Act and the Toxic Substances Control Act, affect our business. These and other laws govern our use, handling and disposal of various biological, chemical and radioactive substances used in, and wastes generated by, our operations. If our operations result in contamination of the environment or expose individuals to hazardous substances, we could be liable for damages and governmental fines. We believe that we are in material compliance with applicable environmental laws and that continued compliance therewith will not have a material adverse effect on our business. We cannot predict, however, how changes in these laws may affect our future operations.

Europe and Rest of World Government Regulation

In addition to regulations in the United States, we will be subject to a variety of regulations in other jurisdictions governing, among other things, clinical trials and any commercial sales and distribution of our products. Whether or not we obtain FDA approval of a product, we must obtain the requisite approvals from regulatory authorities in foreign countries prior to the commencement of clinical trials or marketing of the product in those countries. Certain countries outside of the United States have a similar process that requires the submission of a clinical trial application much like the IND prior to the commencement of human clinical trials. In the EU, for example, a clinical trial application must be submitted to each country's national health authority and an independent ethics committee, much like the FDA and IRB, respectively. Once the clinical trial application is approved in accordance with a country's requirements, clinical trial development may proceed. Because biologically sourced raw materials are subject to unique contamination risks, their use may be restricted in some countries.

The requirements and process governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. In all cases, the clinical trials are conducted in accordance with GCP and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

To obtain regulatory approval of an investigational drug or biological product under EU regulatory systems, we must submit a marketing authorization application. The application used to file the BLA in the United States is similar to that required in the EU, with the exception of, among other things, country-specific document requirements.

For other countries outside of the EU, such as countries in Eastern Europe, Latin America or Asia, the requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary from country to country. In all cases, again, the clinical trials are conducted in accordance with GCP and the applicable regulatory requirements and the ethical principles that have their origin in the Declaration of Helsinki.

If we or our potential collaborators fail to comply with applicable foreign regulatory requirements, we may be subject to, among other things, fines, suspension or withdrawal of regulatory approvals, product recalls, seizure of products, operating restrictions and criminal prosecution.

Legal Proceedings

We are not currently subject to any material legal proceedings.

Facilities

We lease a 24,687 square foot facility in Berkeley, CA for research and development and administrative activities. The current lease agreement commenced on June 1, 2014 and has an initial term expiring on August 31, 2016. In February 2015, we entered into an addendum to the lease, which extends the term of the lease through December 31, 2018, with an option to extend until December 31, 2020. We believe that our existing facilities are adequate to meet our current needs, and that suitable additional alternative spaces will be available in the future on commercially reasonable terms.

Employees

As of March 31, 2015, we had 53 full-time employees, 20 of whom hold Ph.D. degrees, 41 of whom were engaged in research and development activities and 12 of whom were engaged in finance, business development, facilities, human resources and administrative support. None of our employees are subject to a collective bargaining agreement. We consider our relationship with our employees to be good.

MANAGEMENT

Executive Officers and Directors

Our executive officers and directors, their respective positions and their respective ages at March 31, 2015 are as follows:

Name	Age	Position(s)
Executive Officers		
Stephen T. Isaacs	66	Chairman, Director, President and Chief Executive Officer
Gregory W. Schafer	50	Chief Operating Officer
Thomas W. Dubensky, Jr., Ph.D.	57	Chief Scientific Officer
Dirk G. Brockstedt, Ph.D.	46	Senior Vice President of Research and Development
Jennifer Lew	42	Senior Vice President of Finance
Non-Employee Directors		
Gerald Chan(3)	64	Director
William M. Greenman(1)(3)	48	Director
Ross Haghighat(1)(2)	51	Director
Frank McCormick, Ph.D.(3)	64	Director
Stephanie Monaghan O'Brien(1)(2)	56	Director

(1) Member of the audit committee.
(2) Member of the compensation committee.
(3) Member of the nominating and corporate governance committee.

Executive Officers

Stephen T. Isaacs has served as our Chairman, Director, President and Chief Executive Officer since 2008. Prior to Aduro, Mr. Isaacs founded Cerus Corporation, a biomedical products company commercializing the Intercept Blood Systems, in 1991. He served as President and Chief Executive Officer of Cerus from 1991 to 2004. Prior to Cerus, Mr. Isaacs founded and served as Chief Executive Officer and President of HRIS Associates and HRI Research, both biotechnology companies focusing on research and development. He held a non-teaching faculty position in the Department of Chemistry at the University of California Berkeley from 1978 to 1986. Mr. Isaacs has published over 20 peer-reviewed scientific articles and is an inventor on over 40 issued patents. Mr. Isaacs holds a B.A. degree in Biochemistry from University of California Berkeley, and had graduate training in organic chemistry in the Ph.D. program in the Department of Chemistry at Berkeley. Because of Mr. Isaacs' biomedical expertise, extensive knowledge of our company and experience as founder and executive officer of biotechnology companies, we believe he is able to make valuable contributions to our board of directors.

Gregory W. Schafer has served as our Chief Operating Officer since July 2013. Prior to joining Aduro, he served as Chief Financial Officer of Jennerex, Inc, a private biotechnology company, from June 2010 until July 2013, where he was responsible for finance, accounting, planning, investor relations and treasury functions. Prior to Jennerex, he served as Chief Financial Officer of Onyx Pharmaceuticals, Inc., a public biotechnology company, from April 2006 until January 2009, where he was responsible for finance, accounting, risk management and strategic and operational planning. Before joining Onyx, he served as Chief Financial Officer and Vice President of finance for IntraBiotics Pharmaceuticals and Cerus Corporation, both biotechnology companies. Prior to Cerus, Mr. Schafer worked as a management consultant for Deloitte & Touche LLP. Mr. Schafer also serves on the board of directors for Capricor, Inc., a public biotechnology company. He received his M.B.A. from the Anderson Graduate School of Management at the University of California, Los Angeles and a B.S.E. in mechanical engineering from the University of Pennsylvania.

Thomas W. Dubensky, Jr., Ph.D. has served as our Chief Scientific Officer since September 2011. From 2009 to 2011, Dr. Dubensky served as Chief Scientific Officer of Immune Design Corp., a biotechnology company, where he was responsible for overseeing the development of immune therapies based on proprietary molecularly defined adjuvants and dendritic cell targeting vaccine platforms. He was a co-founder and Chief Scientific Officer of Anza Therapeutics, Inc., a biotechnology company which was spun out from Cerus Corporation in 2007, where he served as the Vice President of Research beginning in 2002. At Cerus and at Anza, he helped to develop vaccine platforms based on attenuated strains of *Listeria monocytogenes*, which serves as the technology basis for Aduro. Previously, Dr. Dubensky developed vaccine platforms based on alphaviruses, adenoviruses, retroviruses/lentiviruses and plasmid DNA in positions of increasing responsibility at Viagene Biotech, Inc., Chiron Corporation and Onyx Pharmaceuticals, Inc, all biotechnology companies. Dr. Dubensky has co-authored more than 60 scientific papers and is an inventor on more than 25 issued U.S. patents and multiple pending applications. Dr. Dubensky received his B.A. in Bacteriology and Immunology from the University of California, Berkeley; he earned his Ph.D. at the University of Colorado Health Sciences Center; and he was a post-doctoral fellow at Harvard Medical School in the Department of Pathology.

Dirk G. Brockstedt, Ph.D. joined Aduro in April 2009 and has served as our Senior Vice President of Research and Development since September 2011. Prior to joining Aduro, Dr. Brockstedt held various positions in the immunology department of Cerus Corporation since joining that company in 2002 and served as Cerus Corporation's Director, Immunology from 2006 to 2007. He was the third employee in the original Immunotherapy group at Cerus Corporation. Prior to Cerus Corporation, he was a scientist at Aventis in the Immunotherapy and Anti-Angiogenesis group from 1999 until 2002, developing novel therapies against cancer. Dr. Brockstedt has co-authored 36 scientific papers and is a named inventor on five issued patents and several pending applications. Dr. Brockstedt holds a Diploma/Masters of Science in Microbiology from the University of Kiel; he earned his Ph.D. from the University of Kiel and Stanford University, and he was a post-doctoral fellow at the Stanford School of Medicine in the department of Pathology.

Jennifer Lew joined Aduro in October 2013 and has served as our Senior Vice President of Finance since January 2015. Prior to joining Aduro, Ms. Lew held various roles at Dynavax Technologies Corporation, a biopharmaceutical company, from August 2006 to October 2013, most recently as Vice President of Finance and Principal Accounting Officer, where she oversaw accounting and finance operations. Prior to joining Dynavax, Ms. Lew held positions as Assistant Controller and Director of Finance at QRS Corporation, a publicly-held technology company, from 2000 to 2004. Ms. Lew was a member of the audit practice at Ernst & Young from 1994 to 1999. She earned a B.A. in Economics/Accounting and Government from Claremont McKenna College and is a Certified Public Accountant (inactive status).

Board of Directors

Dr. Gerald Chan has served on our board of directors since 2014. Dr. Chan co-founded Morningside Venture (VI) Investments Limited, a private investment group with venture, private equity and property investments, in 1986. He has served as a member of the Global Advisory Council of the International Society for Stem Cell Research since 2008, the Global Advisory Council of Harvard University since 2012, the Dean's Board of Advisors of the Harvard School of Public Health since 2011, the advisory boards of the Cold Spring Harbor Conferences Asia since 2008, the Johns Hopkins Nanjing Center since 2004 and the Columbia University Center for Radiological Research since 2010. Dr. Chan also has been a member of the board of directors of Hang Lung Group Limited since 1986. Dr. Chan received his B.S. and M.S. degrees in engineering from the University of California, Los Angeles, and his Master's degree in medical radiological physics and Doctor of Science degree in radiation biology from Harvard University. He did his post-doctoral training at the Dana-Farber Cancer Institute as a fellow of the Leukemia Society of America. Because of his extensive experience in life science investments, we believe Dr. Chan will make valuable contributions to our board of directors.

William M. Greenman has served as a member of our board of directors since 2010. Mr. Greenman is currently the President and Chief Executive Officer of Cerus Corporation, and has held several executive and management positions with Cerus since joining the company in 1995. Prior to Cerus, he worked in various

marketing and business development positions in Baxter's Biotech Division from 1991 to 1995. Mr. Greenman holds undergraduate degrees in Biological Sciences and Economics from Stanford University. Because of his extensive experience holding executive positions and knowledge of the biomedical industry, we believe Mr. Greenman is able to make valuable contributions to our board of directors.

Ross Haghighat has served as a member of our board of directors since 2009. Mr. Haghighat is the founder, Chairman and Managing Partner of Triton Systems, Inc. Mr. Haghighat has served on the board of Triton Systems, Inc., a product venturing company, where he has also served as its Chief Executive Officer since 2009. Mr. Haghighat has served on the board of directors of Triton Systems, S12 Technologies and FRX Polymers since 2009. Mr. Haghighat holds a Bachelor's of Science and a Masters in Material Science, Organometallic Chemistry from Rutgers University and a Master of Business Administration from Boston College. Because of his extensive experience in the biotechnology field, we believe Mr. Haghighat will provide valuable contributions to our board of directors.

Frank McCormick, Ph.D., F.R.S., D.Sc. (Hon) has served as a member of our board of directors since 2010. Dr. McCormick has held the positions of Director of the University of California, San Francisco, or UCSF, Helen Diller Family Comprehensive Cancer Center, a multidisciplinary research and clinical care organization, since 1997, the position of Associate Dean of the UCSF School of Medicine since 1997 and has been a Fellow of the Royal Society, a society for science, since 1996. Prior to joining the UCSF faculty, Dr. McCormick pursued cancer-related work with several biotechnology firms, including Cetus Corporation as Director of Molecular Biology from 1981 to 1990 and Vice President of Research from 1990 to 1991, and Chiron Corporation as Vice President of Research from 1991 to 1992. In 1992, Dr. McCormick founded Onyx Pharmaceuticals and served as its Chief Scientific Officer until 1996. Dr. McCormick received his B.Sc. in biochemistry from the University of Birmingham, and his Ph.D. in biochemistry from the University of Cambridge and held postdoctoral fellowships in the U.S. at the State University of New York at Stony Brook and in London at the Imperial Cancer Research Fund. Because of Dr. McCormick's extensive experience in the biomedical industry, we believe Dr. McCormick is able to make valuable contributions to our board of directors.

Stephanie Monaghan O'Brien has served as a member of our board of directors since 2011. Ms. O'Brien has been a member of the investment team at Morningside since 1997. She has served as a director for numerous private nonclinical and clinical stage companies developing drugs across a broad spectrum of therapeutic focus, including oncology and immunotherapy, and has extensive experience providing operational and management oversight to venture-backed technology companies. She has also facilitated multiple financings for public and private companies such as Dendreon, BioVex, Stealth Biotherapeutics and Sohu.com. Prior to joining Morningside, Ms. O'Brien spent nine years as a corporate lawyer with Hale and Dorr in the Boston and Washington, D.C. offices, working primarily on public offerings, venture capital finances and start-up companies. She previously worked at Chase Manhattan Bank, working in international portfolio analysis. She received her A.B., cum laude, from Harvard College and her J.D. from New York University School of Law. Because of Ms. O'Brien's extensive experience serving on boards of directors and governing biotechnology companies, we believe she is able to make valuable contributions to our board of directors.

Board Composition

Certain members of our board of directors were elected pursuant to the provisions of our amended and restated voting agreement. Under this agreement, our stockholders that are party to the agreement have agreed to vote their shares to elect to our board of directors: (i) two directors designated by a majority of the outstanding shares Series B convertible preferred stock, one of whom small be designated by MVIL for so long as MVIL holds at least 50% of the shares of Series B convertible preferred stock originally purchase by MVIL; (ii) two directors designated by purchasers who invested at least 60% of the Series C convertible preferred stock investment amount and who shall be reasonably acceptable to MVIL; (iii) the person serving as Chief Executive Officer; and (vi) two individuals to serve as independent directors. This agreement will terminate upon the completion of this offering.

Our board may establish the authorized number of directors from time to time by resolution. Our board of directors currently consists of six members. In accordance with our amended and restated certificate of incorporation to be filed in connection with this offering, immediately after this offering, our board of directors will be divided into three classes with staggered three-year terms. At each annual general meeting of stockholders, the successors to directors whose terms then expire will be elected to serve from the time of election and qualification until the third annual meeting following election. Our directors will be divided among the three classes as follows:

- the Class I directors will be Stephen T. Isaacs and William M. Greenman, and their terms will expire at the annual general meeting of stockholders to be held in 2016;
- the Class II directors will be Ross Haghighat and Frank McCormick, and their terms will expire at the annual general meeting of stockholders to be held in 2017; and
- the Class III directors will be Gerald Chan and Stephanie Monaghan O'Brien, and their terms will expire at the annual general meeting of stockholders to be held in 2018.

We expect that any additional directorships resulting from an increase in the number of directors will be distributed among the three classes so that, as nearly as possible, each class will consist of one third of the directors. The division of our board of directors into three classes with staggered three-year terms may delay or prevent a change of our management or a change in control.

Director Independence

Generally, under the listing requirements and rules of NASDAQ, independent directors must comprise a majority of a listed company's board of directors within one year of the closing of this offering. Our board of directors has undertaken a review of its composition, the composition of its committees and the independence of each director. Our board of directors has determined that, other than Stephen Isaacs by virtue of his position as Chief Executive Officer, none of our directors has a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each is "independent" as that term is defined under the listing requirements of NASDAQ. Accordingly, a majority of our directors is independent, as required under applicable NASDAQ rules. In making this determination, our board of directors considered the current and prior relationships that each non-employee director has with our company and all other facts and circumstances our board of directors deemed relevant in determining their independence, including the beneficial ownership of our capital stock by each non-employee director.

Lead Independent Director

Our board of directors has appointed Stephanie Monaghan O'Brien to serve as our lead independent director. As lead independent director, Ms. O'Brien presides over periodic meetings of our independent directors, serves as a liaison between our Chief Executive Officer and the independent directors and performs such additional duties as our board of directors may otherwise determine and delegate.

Board Committees

The standing committees of our board of directors consist of an Audit Committee, a Compensation Committee and a Nominating and Corporate Governance Committee. Each of the committees report to the board of directors as they deem appropriate and as the board may request. The composition, duties and responsibilities of the committees are set forth below.

Audit Committee

Our audit committee consists of William Greenman, Ross Haghighat and Stephanie Monaghan O'Brien. Our board of directors has determined that William Greenman, Ross Haghighat and Stephanie Monaghan O'Brien

are independent under NASDAQ listing standards and Rule 10A-3(b)(1) of the Exchange Act. The chair of our audit committee is William Greenman, who our board of directors has determined is an "audit committee financial expert" within the meaning of SEC regulations. Our board of directors has also determined that each member of our audit committee has the requisite financial expertise required under the applicable requirements of NASDAQ. In arriving at this determination, the board has examined each audit committee member's scope of experience and the nature of their employment in the corporate finance sector. The primary functions of this committee include:

- reviewing and approving the engagement of our independent registered public accounting firm to perform audit services and any permissible non-audit services;
- evaluating the performance of our independent registered public accounting firm and deciding whether to retain their services;
- monitoring the rotation of partners on our engagement team of our independent registered public accounting firm;
- reviewing our annual and quarterly financial statements and reports and discussing the statements and reports with our independent registered public accounting firm and management, including a review of disclosures under "Management's Discussion and Analysis of Financial Condition and Results of Operations;"
- considering and approving or disapproving all related party transactions;
- reviewing, with our independent registered public accounting firm and management, significant issues that may arise regarding accounting principles and financial statement presentation, as well as matters concerning the scope, adequacy and effectiveness of our financial controls;
- conducting an annual assessment of the performance of the audit committee and its members, and the adequacy of its charter; and
- establishing procedures for the receipt, retention and treatment of complaints received by us regarding financial controls, accounting or auditing matters.

Compensation Committee

Our compensation committee consists of Ross Haghighat and Stephanie Monaghan O'Brien. Our board of directors has determined that each of Ross Haghighat and Stephanie Monaghan O'Brien is independent under NASDAQ listing standards and the rules and regulations of the SEC, is a "non-employee director" as defined in Rule 16b-3 promulgated under the Exchange Act and is an "outside director" as that term is defined in Section 162(m) of the Code. The chair of our compensation committee is Stephanie Monaghan O'Brien. The functions of this committee include:

- determining the compensation and other terms of employment of our chief executive officer and our other executive officers and reviewing and approving corporate performance goals and objectives relevant to such compensation;
- reviewing and recommending to the full board of directors the compensation of our directors;
- evaluating and administering the equity incentive plans, compensation plans and similar programs advisable for us, as well as reviewing and recommending to our board of directors the adoption, modification or termination of our plans and programs;
- establishing policies with respect to equity compensation arrangements;
- reviewing with management our disclosures under the caption "Compensation Discussion and Analysis" and recommending to the full board its inclusion in our periodic reports to be filed with the SEC; and

- reviewing and evaluating, at least annually, the performance of the compensation committee and the adequacy of its charter.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee consists of Gerald Chan, William Greenman and Frank McCormick. Our board of directors has determined that Gerald Chan, William Greenman and Frank McCormick are independent under NASDAQ listing standards and the rules and regulations of the SEC. The chair of our nominating and corporate governance committee is Gerald Chan. The functions of this committee include:

- reviewing periodically and evaluating director performance on our board of directors and its applicable committees, and recommending to our board of directors and management areas for improvement;
- interviewing, evaluating, nominating and recommending individuals for membership on our board of directors;
- reviewing and recommending to our board of directors any amendments to our corporate governance policies; and
- reviewing and assessing, at least annually, the performance of the nominating and corporate governance committee and the adequacy of its charter.

Code of Business Conduct and Ethics

In connection with this offering, our board of directors has adopted a code of business conduct and ethics that applies to all of our employees, officers and directors, including those officers responsible for financial reporting. Upon completion of this offering, our code of business conduct and ethics will be available on our website at www.aduro.com. We intend to disclose any amendments to the code, or any waivers of its requirements, on our website to the extent required by the applicable rules and exchange requirements. The inclusion of our website address in this prospectus does not include or incorporate by reference into this prospectus the information on or accessible through our website.

Compensation Committee Interlocks and Insider Participation

None of the members of the compensation committee is currently or has been at any time one of our officers or employees. None of our executive officers currently serves, or has served during the last year, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving as a member of our board of directors or compensation committee.

Non-Employee Director Compensation

The table below shows all compensation earned by or paid to our non-employee directors during the year ended December 31, 2014.

Name	Fees Earned or Paid in Cash	Option Awards(1)	Total
Gerald Chan	$ —	$ 19,506	$19,506
William M. Greenman	—	10,802	10,802
Ross Haghighat	—	10,802	10,802
Frank McCormick, Ph.D.	—	10,802	10,802
Stephanie Monaghan O’Brien	—	10,802	10,802

(1) The amounts in the "Option Awards" column reflect the aggregate grant date fair value of stock options granted during the calendar year computed in accordance with the provisions of Accounting Standards Codification (ASC) 718, *Compensation—Stock Compensation*. The assumptions that we used to calculate these amounts are discussed in the notes to our audited consolidated financial statements included elsewhere in this prospectus. These amounts do not reflect the actual economic value that will be realized by the named executive officer upon the vesting of the stock options, the exercise of the stock options, or the sale of the common stock underlying such stock options.

Future Director Compensation

Our board of directors has adopted a director compensation policy for non-employee directors to be effective upon the closing of this offering. Pursuant to this policy, non-employee directors will be compensated $35,000 annually for their services and will not receive any additional compensation for any board meetings attended. Our lead non-employee director will receive an additional annual retainer of $15,000. Non-employee directors will receive $7,500 annually for serving on the audit committee ($15,000 annually for the chairman), $5,000 annually for serving on the compensation committee ($10,000 annually for the chairman), and $4,000 annually for serving on the nominating and corporate governance committee ($8,000 annually for the chairman). Non-employee directors will also be reimbursed for their reasonable out-of-pocket expenses incurred in attending meetings of our board of directors and committees of our board of directors. Newly appointed directors will be granted an option to purchase 15,000 shares of our common stock. The shares of common stock subject to these options will vest over three years, with one-third of the shares subject to the option vesting after the first year, and with the remaining shares subject to the option to vest in eight equal quarterly installments thereafter. Each non-employee director will also be granted an option to purchase 13,000 shares of our common stock on the date of each annual meeting of stockholders. The shares of common stock subject to these options will vest quarterly over 12 months. All options granted to our non-employee directors under the policy will vest in full upon the completion of a change in control.

On the date of this offering, we intend to grant each of our non-employee directors an option to purchase shares of our common stock having an exercise price per share equal to the initial public offering price of our common stock in this offering. Ms. O'Brien and Mr. Haghighat will each be granted an option to purchase 65,000 shares of our common stock, Mr. Greenman will be granted an option to purchase 40,000 shares of our common stock, Dr. McCormick will be granted an option to purchase 30,000 shares of our common stock and Mr. Chan will be granted an option to purchase 20,000 shares of our common stock. The shares underlying the options will vest monthly over one year and will vest in full upon the completion of a change in control.

EXECUTIVE COMPENSATION

Summary Compensation Table

The following table sets forth information regarding the compensation awarded to or earned by our Chief Executive Officer and our two other highest paid executive officers during the years ended December 31, 2013 and 2014. Throughout this prospectus, these officers are referred to as our named executive officers.

Name and Principal Position	Year	Salary ($)	Bonus ($)(1)	Option Awards ($)(2)	All Other Compensation ($)	Total ($)
Stephen T. Isaacs	2014	402,500	484,100	609,380	6,146	1,502,126
Chairman, President and Chief Executive Officer	2013	372,501	110,441	26,174	6,657	515,773
Gregory W. Schafer(3)	2014	318,000	267,900	168,673	46	754,619
Chief Operating Officer	2013	150,000	39,759	154,920	276	344,955
Thomas W. Dubensky, Jr., Ph.D.	2014	319,545	265,350	119,043	3,391	707,329
Chief Scientific Officer	2013	312,885	69,812	6,804	3,897	393,398

(1) Includes discretionary annual cash bonuses based on a target percentage of salary and discretionary bonuses for extraordinary performance in 2014 as awarded by the board of directors.

(2) The amounts in the "Option Awards" column reflect the aggregate grant date fair value of stock options granted during the calendar year computed in accordance with the provisions of Accounting Standards Codification (ASC) 718, *Compensation—Stock Compensation*. The assumptions that we used to calculate these amounts are discussed in the notes to our audited consolidated financial statements included elsewhere in this prospectus. These amounts do not reflect the actual economic value that will be realized by the named executive officer upon the vesting of the stock options, the exercise of the stock options, or the sale of the common stock underlying such stock options.

(3) Mr. Schafer became an employee in July 2013.

In March 2015, our compensation committee approved discretionary bonuses to certain of our executive officers, including a bonus of $400,000 to Mr. Isaacs, a bonus of $240,000 to Mr. Schafer and a bonus of $210,000 to Dr. Dubensky.

Outstanding Equity Awards at December 31, 2014

The following table provides information regarding outstanding equity awards held by our named executive officers at December 31, 2014.

		Option Awards			
Name	Vesting Commencement Date	Number of Securities Underlying Unexercised Options Exercisable	Number of Securities Underlying Unexercised Options Unexercisable	Option Exercise Price	Option Expiration Date
Stephen T. Isaacs	5/15/2006	204	—	19.59	5/15/2016
	2/12/2007	7,158	—	19.59	2/12/2017
	2/12/2008	2,126	—	34.31	2/12/2018
	2/12/2008	1,063	—	68.45	2/12/2018
	4/15/2011	241,954	—	0.52	10/24/2021
	4/15/2011	305,222	—	0.52	10/24/2021
	4/15/2011(1)	411,898	37,446	0.52	10/24/2021
	11/9/2012	261,191	—	0.45	3/18/2020
	11/9/2012	19,672	—	0.45	3/18/2020
	11/9/2012	36,532	—	0.45	3/18/2020
	11/27/2013	51,843	—	0.82	11/26/2023
	7/31/2014(2)	93,831	806,959	1.00	7/30/2024
Gregory W. Schafer	7/1/2013(1)	99,686	181,781	0.82	11/26/2023
	7/31/2014(2)	26,023	223,815	1.00	7/30/2024
Thomas W. Dubensky, Jr., Ph.D.	9/1/2011(1)	178,434	41,177	0.52	10/23/2021
	9/1/2011(3)	98,542	19,710	0.52	10/23/2021
	11/9/2012	3,649	—	0.45	3/18/2020
	11/27/2013	13,474	—	0.82	11/26/2023
	7/31/2014(2)	18,367	157,960	1.00	7/30/2024

(1) Twenty-five percent of the shares subject to the option vested on the first anniversary of the vesting commencement date, and the remainder vests in 36 equal monthly installments thereafter.

(2) The option vests as to 1/48 of the shares in monthly installments measured from July 31, 2014.

(3) 9,856 shares subject to the option vested on December 31, 2011, 29,562 shares subject to the option vested on December 31, 2012, 2013 and 2014, and the remaining 19,710 shares subject to the option vest on December 31, 2015.

Employment and Severance Agreements

We entered into an employment agreement with Stephen Isaacs, our Chairman, President and Chief Executive Officer, in February 2010, which was subsequently amended in July 2014. Mr. Isaacs is employed “at will,” which means that he has no definitive term of employment. The employment agreement provides for an annual base salary, which for 2013 was set at $380,000 and provides that Mr. Isaacs will be eligible to participate in any bonus plans established by us. If Mr. Isaacs is terminated by us without just cause and not due to his permanent disability, or if he terminates his employment for good reason, he will receive a lump sum payment equal to one year of his base salary and a lump sum payment equal to the product of his target bonus for the year in which his termination occurs multiplied by a percentage equal to the quotient of the number of days that lapsed in the year of termination divided by 365 (366 if a leap year), we will pay all applicable COBRA payments for up to 12 months, and all of his unvested equity awards will immediately vest in full, subject to Mr. Isaacs’ timely execution and the effectiveness of a release of claims against us. Additionally, upon the occurrence of a change in control, any and all of Mr. Isaacs’ unvested equity awards will immediately vest in full. Mr. Isaacs also entered into our standard proprietary information and inventions agreement.

We entered into an offer letter agreement with Gregory Schafer, our Chief Operating Officer, in April 2013. Mr. Schafer is employed “at will,” which means that he has no definitive term of employment. The offer

agreement provides for an initial base salary of $300,000 and provides for an annual cash bonus with a target level of 30% of his base salary, subject to the achievement of performance metrics. Mr. Schafer's offer letter also provided certain severance benefits, which were replaced in July 2014, when we entered into a severance agreement with Mr. Schafer. The offer letter agreement was subject to execution of our standard proprietary information and inventions agreement. The severance agreement provides that if Mr. Schafer is terminated by us without cause, and not due to his death or disability, or terminates his employment for good reason, each a qualifying termination, he will continue to receive his base salary for a period of six months following the termination date, we will pay applicable COBRA payments for a period of up to six months following the termination date, he will receive a lump sum payment equal to the product of his target bonus for the year in which his termination occurs multiplied by a percentage equal to the quotient of the number of days that lapsed in the year of termination divided by 365 (366 if a leap year), and the unvested portion of all of his equity awards will become vested and exercisable on an accelerated basis as if the termination had occurred six months after the termination date, subject to Mr. Schafer's timely execution and the effectiveness of a release of all claims against us. If Mr. Schafer's qualifying termination occurs during the time period beginning on the closing date of a change in control and ending on the first anniversary of such change in control, then the unvested portion of all of his equity awards shall become vested and exercisable on the qualifying termination date.

We entered into an offer letter agreement with Thomas W. Dubensky, Jr., Ph.D., our Chief Scientific Officer, in September 2011. Dr. Dubensky is employed "at will," which means that he has no definitive term of employment. The offer letter agreement provides for an annual base salary, which for 2013 was set at $315,180 and provides for an annual cash bonus with a target level of not less than 25% of his base salary, subject to the achievement of performance metrics. The offer letter agreement was subject to execution of our standard proprietary information and inventions agreement. In July 2014, we entered into a severance agreement with Dr. Dubensky. The severance agreement provides that if Dr. Dubensky is terminated by us without cause, and not due to his death or disability, or terminates his employment for good reason, each a qualifying termination, he will continue to receive his base salary for a period of six months following the termination date, we will pay applicable COBRA payments for a period of up to six months following the termination date, he will receive a lump sum payment equal to the product of his target bonus for the year in which his termination occurs multiplied by a percentage equal to the quotient of the number of days that lapsed in the year of termination divided by 365 (366 if a leap year), and the unvested portion of all of his equity awards will become vested and exercisable on an accelerated basis as if the termination had occurred six months after the termination date, subject to Dr. Dubensky's timely execution and the effectiveness of a release of all claims against us. If Dr. Dubensky's qualifying termination occurs during the time period beginning on the closing date of a change in control and ending on the first anniversary of such change in control, then the unvested portion of all of his equity awards shall become vested and exercisable on the qualifying termination date.

Employee Benefit Plans

The principal features of our equity incentive plans are summarized below. These summaries are qualified in their entirety by reference to the actual text of the plans, which are filed as exhibits to the registration statement of which this prospectus is a part.

Oncologic, Inc. 2000 Long-Term Incentive Plan

The board of directors of Oncologic, Inc. adopted the Oncologic, Inc. 2000 Long-Term Incentive Plan., or the 2000 Long-Term Incentive Plan, in December 2000. Since the adoption of our 2009 Stock Incentive Plan, our board of directors has not granted and will not grant any additional options under the 2000 Long-Term Incentive Plan. However, the 2000 Long-Term Incentive Plan continues to govern the terms and conditions of outstanding options previously granted under the plan.

The 2000 Long-Term Incentive Plan provided for the grant of incentive stock options to our employees, and for the grant of non-qualified stock options, stock appreciation rights, restricted stock, dividend equivalents

and other incentive awards to our employees, directors and consultants. Our board of directors, or a committee thereof appointed by our board of directors, administers the 2000 Long-Term Incentive Plan and the stock awards granted thereunder. The administrator has the authority to determine the terms and conditions of stock awards granted under the plan.

In the event of a corporate transaction, including a reorganization, merger, consolidation or sale of all or substantially all of our assets, the board of directors may, without the consent or approval of any participant: (1) accelerate the vesting and the time at which stock awards may be exercised, in whole or in part, of the stock awards and provide for their termination if not exercised prior to the corporate transaction; (2) require the mandatory surrender of some or all outstanding stock awards as of a specified date, in which case our board of directors would cancel such awards prior to the corporate transaction in exchange for a cash payment; (3) make such adjustments to the stock awards so that such stock awards thereafter cover the number and class of shares of stock or other securities to which the holder of such stock awards would have been entitled pursuant to the terms of the corporate transaction had such holder been the holder of record of the number of shares covered by the stock award; or (4) in the event of a transaction in which our common stockholder receive shares in the acquiror, the conversion of the stock awards into awards to acquire shares of the acquiror, assumption, continuation or substitution of a stock award by a successor corporation.

Triton BioSystems, Inc. 2001 Equity Incentive Plan

The board of directors of Triton BioSystems, Inc. adopted, and its stockholders approved, the Triton BioSytems, Inc. 2001 Equity Incentive Plan, or the 2001 Equity Incentive Plan, in March 2001. Since the adoption of our 2009 Stock Incentive Plan, our board of directors has not granted and will not grant any additional options under the 2001 Equity Incentive Plan. However, the 2001 Equity Incentive Plan continues to govern the terms and conditions of outstanding options previously granted under the plan.

The 2001 Equity Incentive Plan provided for the grant of incentive stock options to our employees, and for the grant of non-qualified stock options and restricted shares to our employees, directors, consultants and other individuals who provide services to us. Our board of directors, or a committee thereof appointed by our board of directors, administers the 2001 Equity Incentive Plan and the stock awards granted thereunder. The administrator has the authority to determine the terms and conditions of the options and restricted shares granted under the plan.

In the event of a change in control, including a sale of more than 50% of the voting power of our stock or a sale of substantially all of our assets, the administrator will take any one or more of the following actions with respect to each outstanding stock award: (1) cause an option to become fully vested and exercisable, (2) cause restricted shares to become non-forfeitable, (3) cancel an option in exchange for an option to purchase common stock of any successor company, (4) substitute restricted shares in exchange for restricted stock of any successor company, (5) cancel an option in exchange for cash and/or other consideration with a value equal to the difference between the option exercise price and the fair market value per share on the date of the change in control, or (6) redeem restricted shares in exchange for cash and/or other consideration.

2009 Stock Incentive Plan

Our board of directors adopted our 2009 Stock Incentive Plan, or the 2009 Stock Incentive Plan, and our stockholders approved our 2009 Stock Incentive Plan in October 2009. The 2009 Stock Incentive Plan was subsequently amended in 2011. The 2009 Stock Incentive Plan provides for the grant of incentive stock options to our employees and nonstatutory stock options and stock purchase awards to our employees, directors and consultants. At December 31, 2014, options to purchase 5,970,382 shares of our common stock at a weighted-average exercise price per share of $0.80 were outstanding under the 2009 Stock Incentive Plan. No other awards have been granted under the 2009 Stock Incentive Plan. At December 31, 2014, 3,154,755 shares of our common stock were available for future issuance pursuant to awards granted under the 2009 Stock Incentive Plan.

Following the completion of this offering and in connection with the effectiveness of our 2015 Plan, the 2009 Stock Incentive Plan will terminate and no further awards will be granted under the 2009 Stock Incentive Plan. However, all outstanding awards will continue to be governed by their existing terms.

Our board of directors, or a committee thereof appointed by our board of directors, administers the 2009 Stock Incentive Plan and the stock awards granted thereunder. The administrator has the authority to determine the terms and conditions of the options and restricted shares granted under the plan.

In the event of a change of control, including a reorganization, merger, consolidation or sale of all or substantially all of our assets, the board of directors may: (1) accelerate the vesting, in whole or in part, of the stock awards and provide for the cancellation of the awards with notice to the holders at least three days prior to the change in control, and its termination of the Stock Incentive Plan prior to the change in control; (2) cancel or arrange for the cancellation of the plan and all outstanding stock awards with notice to the holders at least three days prior to the change in control without the payment of any consideration; (3) the assumption of the 2009 Stock Incentive Plan and all outstanding stock awards by the successor corporation or its parent; (4) the substitution by the successor corporation or its parent of options in the successor corporation or its parent with substantially the same terms for the outstanding options; or (5) the settlement for full value of all outstanding options under the 2009 Stock Incentive Plan determined as the number of shares to which the options relate multiplied by the difference between the fair market value of a share of our common stock on the date of the change in control and the exercise price.

2015 Equity Incentive Plan

Our board of directors adopted our 2015 Plan in March 2015 and our stockholders approved our 2015 Plan in April 2015. Our 2015 Plan, which becomes effective upon the pricing of this offering, is the successor to and continuation of the Stock Incentive Plan. Our 2015 Plan provides for the grant of incentive stock options, or ISOs, to our employees and for the grant of nonstatutory stock options, or NSOs, stock appreciation rights, restricted stock awards, RSU awards, performance stock awards, performance cash awards, and other forms of stock awards to our employees, directors, and consultants.

Authorized shares. The maximum number of shares of our common stock that may be issued pursuant to stock awards under our 2015 Plan is equal to 6,134,292, which number of shares will be increased by any shares subject to stock options or other stock awards granted under the 2009 Stock Incentive Plan that would have otherwise returned to our 2009 Stock Incentive Plan (such as upon the expiration or termination of a stock option prior to vesting), not to exceed 8,995,064. Additionally, the number of shares of our common stock reserved for issuance pursuant to stock awards under our 2015 Plan will automatically increase on January 1 of each year for a period of up to ten years, beginning on January 1, 2016 and ending on and including January 1, 2025, by 4 % of the total number of shares of our capital stock outstanding on December 31 of the preceding calendar year, or a lesser number of shares determined by our board of directors. The maximum number of shares of our common stock that may be issued upon the exercise of ISOs under our 2015 Plan is 30,671,460.

Shares subject to stock awards granted under our 2015 Plan that expire or terminate without being exercised in full, or that are paid out in cash rather than in shares, do not reduce the number of shares available for issuance under our 2015 Plan. Additionally, shares issued pursuant to stock awards under our 2015 Plan that we repurchase or that are forfeited, as well as shares used to pay the exercise price of a stock award or to satisfy the tax withholding obligations related to a stock award, become available for future grant under our 2015 Plan.

Plan administration. Our board of directors, or a duly authorized committee of our board of directors, will administer our 2015 Plan. Our board of directors may also delegate to one or more of our officers the authority to (1) designate employees (other than officers) to receive specified stock awards, and (2) determine the number of shares subject to such stock awards. Subject to the terms of our 2015 Plan, the board of directors has the authority to determine the terms of awards, including recipients, the exercise, purchase or strike price of stock

awards, if any, the number of shares subject to each stock award, the fair market value of a share of our common stock, the vesting schedule applicable to the awards, together with any vesting acceleration, and the form of consideration, if any, payable upon exercise or settlement of the award and the terms of the award agreements for use under our 2015 Plan.

The board of directors has the power to modify outstanding awards under our 2015 Plan. The board of directors has the authority to reprice any outstanding option or stock appreciation right, cancel any outstanding stock award in exchange for new stock awards, cash or other consideration or take any other action that is treated as a repricing under GAAP, with the consent of any adversely affected participant.

Section 162(m) limits. At such time as necessary for compliance with Section 162(m) of the Code, no participant may be granted stock awards that are intended to comply with Section 162(m) of the Code covering more than 2,000,000 shares of our common stock under our 2015 Plan during any calendar year pursuant to stock options, stock appreciation rights and other stock awards whose value is determined by reference to an increase over an exercise price or strike price of at least 100% of the fair market value of our common stock on the date of grant. Additionally, no participant may be granted in a calendar year a performance stock award covering more than 2,000,000 shares of our common stock or a performance cash award having a maximum value in excess of $5,000,000 under our 2015 Plan. These limitations are intended to give us the flexibility to grant compensation that will not be subject to the $1,000,000 annual limitation on the income tax deductibility imposed by Section 162(m) of the Code.

Performance awards. We believe our 2015 Plan permits the grant of performance-based stock and cash awards that may qualify as performance-based compensation that is not subject to the $1,000,000 limitation on the income tax deductibility imposed by Section 162(m) of the Code. Our compensation committee may structure awards so that the stock or cash will be issued or paid only following the achievement of certain pre-established performance goals during a designated performance period.

Our compensation committee may establish performance goals by selecting from one or more of the following performance criteria: (1) profit before tax; (2) billings; (3) revenues; (4) net revenues; (5) earnings (which may include earnings before interest and taxes, earnings before taxes, and net earnings); (6) operating income; (7) operating margin; (8) operating profit; (9) controllable operating profit, or net operating profit; (10) net profit; (11) gross margin; (12) operating expenses or operating expenses as a percentage of revenue; (13) net income; (14) earnings per share; (15) total stockholder return; (16) market share; (17) return on assets or net assets; (18) our stock price; (19) growth in stockholder value relative to a pre-determined index; (20) return on equity; (21) return on invested capital; (22) cash flow (including free cash flow or operating cash flows); (23) cash conversion cycle; (24) economic value added; (25) individual confidential business objectives; (26) contract awards or backlog; (27) overhead or other expense reduction; (28) credit rating; (29) strategic plan development and implementation; (30) succession plan development and implementation; (31) improvement in workforce diversity; (32) customer indicators; (33) new product invention or innovation; (34) attainment of research and development milestones; (35) improvements in productivity; (36) bookings; (37) initiation of phases of clinical trials and/or studies by specified dates; (38) regulatory body approval with respect to products, studies and/or trials; (39) patient enrollment dates; (40) commercial launch of products; and (41) to the extent that an award is not intended to comply with Section 162(m) of the Code, other measures of performance selected by our board of directors or compensation committee.

Our compensation committee may establish performance goals on a company-wide basis, with respect to one or more business units, divisions, affiliates, or business segments, and in either absolute terms or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. Unless otherwise specified by our board of directors (i) in the award agreement at the time the award is granted or (ii) in such other document setting forth the performance goals at the time the performance goals are established, our compensation committee will appropriately make adjustments in the method of calculating the attainment of the performance goals as follows: (1) to exclude restructuring and/or other nonrecurring charges;

(2) to exclude exchange rate effects; (3) to exclude the effects of changes to GAAP; (4) to exclude the effects of any statutory adjustments to corporate tax rates; (5) to exclude the effects of any "extraordinary items" as determined under GAAP; (6) to exclude the dilutive effects of acquisitions or joint ventures; (7) to assume that any business divested by our company achieved performance objectives at targeted levels during the balance of a performance period following such divestiture; (8) to exclude the effect of any change in the outstanding shares of our common stock by reason of any stock dividend or split, stock repurchase, reorganization, recapitalization, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to common stockholders other than regular cash dividends; (9) to exclude the effects of stock based compensation and the award of bonuses under our bonus plans; (10) to exclude costs incurred in connection with potential acquisitions or divestitures that are required to be expensed under GAAP; (11) to exclude the goodwill and intangible asset impairment charges that are required to be recorded under GAAP; (12) to exclude the effect of any other unusual, non-recurring gain or loss or other extraordinary item; (13) to exclude the effects of the timing of acceptance for review and/or approval of submissions to the FDA or any other regulatory body; and (14) to exclude the effects of entering into or achieving milestones involved in licensing joint ventures.

***Changes to Capital Structure*.** In the event there is a specified type of change in our capital structure, such as a stock split, reverse stock split or recapitalization, appropriate adjustments will be made to: (1) the class and maximum number of shares reserved for issuance under our 2015 Plan; (2) the class and maximum number of shares by which the share reserve may increase automatically each year; (3) the class and maximum number of shares that may be issued upon the exercise of incentive stock options; (4) the class and maximum number of shares subject to stock awards that can be granted in a calendar year (as established under our 2015 Plan pursuant to Section 162(m) of the Code); and (5) the class and maximum number of shares and exercise price, strike price or purchase price, if applicable, of all outstanding stock awards.

***Corporate transactions*.** Our 2015 Plan provides that in the event of certain specified significant corporate transactions, as defined under our 2015 Plan, each outstanding award will be treated as the administrator determines. The administrator may (1) arrange for the assumption, continuation or substitution of a stock award by a successor corporation; (2) arrange for the assignment of any reacquisition or repurchase rights held by us to a successor corporation; (3) accelerate the vesting, in whole or in part, of the stock award and provide for its termination prior to the transaction; (4) arrange for the lapse, in whole or in part, of any reacquisition or repurchase rights held by us; (5) cancel or arrange for the cancellation of the stock award prior to the transaction in exchange for a cash payment, if any, determined by the board of directors; or (6) cancel or arrange for the cancellation of the stock award prior to the transaction in exchange for a payment, in such form as may be determined by our board of directors equal to the excess, if any, of the value of the property the participant would have received upon the exercise of the stock award immediately prior to the transaction over any exercise price payable by such holder in connection with such exercise. The plan administrator is not obligated to treat all stock awards or portions of stock awards, even those that are of the same type, in the same manner.

***Plan amendment or termination*.** Our board of directors has the authority to amend, suspend, or terminate our 2015 Plan, provided that such action does not materially impair the existing rights of any participant without such participant's written consent. No ISOs may be granted after the tenth anniversary of the date our board of directors adopted our 2015 Plan. No stock awards may be granted under our 2015 Plan while it is suspended or after it is terminated.

2015 Employee Stock Purchase Plan

Our board of directors adopted our ESPP in March 2015 and our stockholders approved our ESPP in April 2015. Our ESPP, which becomes effective upon the pricing of this offering, is intended to qualify as an employee stock purchase plan under Section 423 of the Code. The first offering period under our ESPP will begin and end upon a date to be approved by our board of directors or the compensation committee.

***Authorized shares*.**The maximum aggregate number of shares of our common stock that may be issued under our ESPP is 720,000 shares. Additionally, the number of shares of our common stock reserved for issuance

under our ESPP will increase automatically each year for a period of up to ten years, beginning on January 1, 2016 and continuing through and including January 1, 2025, by the lesser of (1) 1% of the total number of shares of our capital stock outstanding on December 31 of the preceding calendar year; (2) 1,080,000 shares of common stock; or (3) such lesser number as determined by our board of directors. The stock purchasable under our ESPP will be shares of authorized but unissued or reacquired common stock, including shares repurchased by us in the open market. Shares subject to purchase rights granted under our ESPP that terminate without having been exercised in full will be available for grant under our ESPP.

ESPP administration. Our board of directors will administer our ESPP. Our board of directors may delegate authority to administer our ESPP to our compensation committee. The administrator may approve offerings with a duration of not more than 27 months, and may specify one or more shorter purchase periods within each offering. Each offering will have one or more purchase dates on which shares of our common stock will be purchased for the employees who are participating in the offering. The administrator, in its discretion, will determine the terms of offerings under our ESPP including determining which of our designated affiliates will be eligible to participate in the 423 component of our ESPP and which of our designated affiliates will be eligible to participate in the non-423 component of our ESPP.

Eligibility. Our employees, including executive officers, may have to satisfy one or more of the following service requirements before participating in our ESPP, as determined by the administrator: (1) customary employment for more than 20 hours per week and more than five months per calendar year, or (2) continuous employment for a minimum period of time, not to exceed two years. An employee may not be granted rights to purchase stock under our ESPP if such employee (a) immediately after the grant would own stock possessing 5% or more of the total combined voting power or value of our common stock; or (b) holds rights to purchase stock under our ESPP that would accrue at a rate that exceeds $25,000 worth of our stock for each calendar year that the rights remain outstanding.

Purchase rights and purchase price. Our ESPP permits participants to purchase shares of our common stock through payroll deductions or other methods with up to 15% of their earnings, as defined in the ESPP. The purchase price of the shares will be not less than 85% of the lower of the fair market value of our common stock on the first day of an offering or on the date of purchase.

Corporate transactions. In the event of certain specified corporate transactions, as defined in our ESPP, a successor corporation may assume, continue or substitute each outstanding purchase right. If the successor corporation does not assume, continue or substitute for the outstanding purchase rights, the offering in progress may be shortened and a new exercise date will be set, so that the participants' purchase rights can be exercised and terminate immediately thereafter.

Changes to Capital Structure. In the event there occurs a change in our capital structure through such actions as a stock split, merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, large nonrecurring cash dividend, liquidating dividend, combination of shares, exchange of shares, change in corporate structure or similar transaction, the board of director will make appropriate adjustments to: (1) the number of shares reserved under our ESPP; (2) the maximum number of shares by which the shares reserve may increase automatically each year; (3) the number of shares and purchase price of all outstanding purchase rights; and (4) the number of shares that are subject to purchase limits under ongoing offerings.

ESPP amendment or termination. Our board of directors has the authority to amend, suspend or terminate our ESPP, at any time and for any reason. Any benefits, privileges, entitlements and obligations under any outstanding purchase rights granted before an amendment, suspension or termination of our ESPP will not be materially impaired except (1) with the participant's consent; (2) to comply with any laws, listing requirements or regulations; or (3) to obtain or maintain favorable tax, listing or regulatory treatment.

401(k) Plan

We maintain a tax-qualified retirement plan that provides eligible U.S. employees with an opportunity to save for retirement on a tax advantaged basis. Eligible employees may defer eligible compensation subject to applicable annual Code limits. The 401(k) plan permits participants to make both pre-tax and certain after-tax (Roth) deferral contributions. These contributions are allocated to each participant's individual account and are then invested in selected investment alternatives according to the participant's directions. Employees are immediately and fully vested in their contributions. Currently, we do not make matching contributions or discretionary contributions to the 401(k) plan. The 401(k) plan is intended to be qualified under Section 401(a) of the Code with the 401(k) plan's related trust intended to be exempt under Section 501(a) of the Code. As a tax-qualified retirement plan, contributions to the 401(k) plan and earnings on those contributions are not taxable to the employees until distributed from the 401(k) plan.

Limitation on Liability and Indemnification Matters

Our amended and restated certificate of incorporation and restated bylaws, each to be effective immediately following the completion of this offering, will provide that we will indemnify our directors and officers, and may indemnify our employees and other agents, to the fullest extent permitted by the Delaware General Corporation Law. However, Delaware law prohibits our amended and restated certificate of incorporation from limiting the liability of our directors for the following:

- any breach of a director's duty of loyalty to us or to our stockholders;
- acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- unlawful payment of dividends or unlawful stock repurchases or redemptions; and
- any transaction from which a director derived an improper personal benefit.

If Delaware law is amended to authorize corporate action further eliminating or limiting the personal liability of a director, then the liability of our directors will be eliminated or limited to the fullest extent permitted by Delaware law, as so amended. Our amended and restated certificate of incorporation does not eliminate a director's duty of care and, in appropriate circumstances, equitable remedies, such as injunctive or other forms of non-monetary relief, remain available under Delaware law. It also does not affect a director's responsibilities under any other laws, such as the federal securities laws or other state or federal laws. Under our amended and restated bylaws, we will also be empowered to enter into indemnification agreements with our directors, officers, employees and other agents and to purchase insurance on behalf of any person whom we are required or permitted to indemnify.

In addition to the indemnification required in our amended and restated certificate of incorporation and amended and restated bylaws, we have entered into indemnification agreements with each of our current directors and executive officers. These agreements provide for the indemnification of such persons for all reasonable expenses and liabilities incurred in connection with any action or proceeding brought against them by reason of the fact that they are or were serving in such capacity. We believe that these certificate of incorporation and bylaws provisions and indemnification agreements are necessary to attract and retain qualified persons as directors, officers and employees. Furthermore, we have obtained director and officer liability insurance to cover liabilities our directors and officers may incur in connection with their services to us and expect to increase the level upon completion of this offering.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if successful, might benefit us and our stockholders. A

stockholder's investment may be harmed to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions. Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, or the Securities Act, may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable. There is no pending litigation or proceeding naming any of our directors or officers as to which indemnification is being sought, nor are we aware of any pending or threatened litigation that may result in claims for indemnification by any director or officer.

CERTAIN RELATIONSHIPS AND RELATED PERSON TRANSACTIONS

The following is a description of transactions since January 1, 2011 to which we have been a party, in which the amount involved exceeded or will exceed $120,000, and in which any of our executive officers, directors, promoters or holders of more than 5% of any class of our voting securities, or an affiliate or immediate family member thereof, had or will have a direct or indirect material interest, other than compensation, termination and change in control arrangements, which are described under "Executive Compensation." We believe the terms obtained or consideration that we paid or received, as applicable, in connection with the transactions described below were comparable to terms available or the amounts that would be paid or received, as applicable, in arm's-length transactions with unrelated third parties.

Convertible Note Financing

In August 2013, September 2013, October 2013, December 2013 and January 2014 we issued and sold to investors, including an executive officer and holders of more than 5% of our capital stock, convertible promissory notes, or the notes, in the aggregate principal amount of $13.0 million, which we refer to as our bridge notes. The bridge notes issued carried an interest rate of 5.0% per annum.

The participants in these loan arrangements included the following holders of more than 5% of our capital stock or entities affiliated with them. The following table presents the aggregate principal amount of convertible promissory notes issued to these related parties for more than $120,000.

	Aggregate Principal Amount of Notes
Morningside Venture (VI) Investments Limited(1)	$ 8,000,000
John E. and Lois A. Rogers	$ 3,116,000

(1) Dr. Chan and Ms. O'Brien are members of our board of directors who have been designated by MVIL.

Additionally, pursuant to the Series B purchase agreement, as defined below, we issued and sold to MVIL convertible promissory notes in the aggregate principal amount of $9.0 million. The notes carried no interest.

Series B Preferred Stock Financing

In April 2011, we entered into a Series B convertible preferred stock purchase agreement, or the Series B purchase agreement, pursuant to which we issued and sold an aggregate of 12,716,523 shares of our Series B convertible preferred stock for $1.19 per share, warrants exercisable for 615,669 shares of our common stock and warrants exercisable for 83,771 shares of Series B Preferred Stock for aggregate consideration of approximately $15.1 million. In addition during 2011, the aggregate amount of $1.1 million of convertible notes converted into 1,185,806 shares of Series B convertible preferred stock at a conversion price equal to approximately $0.95 per share, a 20% discount to the purchase price, and approximately $9.0 million of convertible notes converted during 2013 and 2014 into 7,539,380 shares of Series B convertible preferred stock at a conversion price equal to $1.19 per share. The table below sets forth the number of shares of Series B convertible preferred stock issued to our stockholders who held more than 5% of any class of our voting securities and their affiliates, to the extent they were issued more than $120,000 of our Series B convertible preferred stock. For each share of preferred stock set forth in the table below, the holder will receive, upon conversion, 0.72 of a share of our common stock upon the closing of this offering.

	Number of Shares of Series B Convertible Preferred Stock	Number of Common Stock Warrant Shares	Number of Series B Preferred Stock Warrant Shares	Aggregate Purchase Price
Morningside Venture (VI) Investments Limited(1)	15,497,614	452,363	61,410	$18,500,000(2)
John E. and Lois A. Rogers	3,046,477	68,558	11,815	$ 3,559,341(3)

(1) Dr. Chan and Ms. O'Brien are members of our board of directors who have been designated by MVIL.
(2) Includes the conversion of an aggregate principal amount of $9.0 million of convertible notes into 7,539,380 shares of Series B convertible preferred stock.
(3) Includes the conversion of an aggregate principal and interest amount of $0.3 million of convertible notes into 323,924 shares of Series B convertible preferred stock.

Series C Preferred Stock Financing

In May 2014, we entered into a Series C convertible preferred stock purchase agreement, or the Series C purchase agreement, pursuant to which we issued and sold an aggregate of 19,423,965 shares of our Series C convertible preferred stock for approximately $2.17 per share, for aggregate consideration of approximately $42.2 million. In addition, the aggregate amount of approximately $13.5 million of the bridge notes converted into 6,199,217 shares of Series C convertible preferred stock at a conversion price equal to approximately $2.17 per share. The table below sets forth the number of shares of Series C convertible preferred stock issued to stockholders who held more than 5% of any class of our voting securities and their affiliates, to the extent they were issued more than $120,000 of our Series C convertible preferred stock. For each share of preferred stock set forth in the table below, the holder will receive, upon conversion, 0.72 of a share of our common stock upon the closing of this offering.

	Number of Shares of Series C Convertible Preferred Stock	Aggregate Purchase Price
Morningside Venture (VI) Investments Limited(1)	15,345,433	$ 33,299,588(3)
Johnson & Johnson Development Corporation	4,608,295	$ 10,000,000
John E. and Lois A. Rogers(2)	4,244,750	$ 9,211,107(4)

(1) Dr. Chan and Ms. O'Brien are members of our board of directors who have been designated by MVIL.
(2) Consists of (a) 3,955,243 purchased by John E. Rogers and Lois A. Rogers, JTWROS, (b) 52,637 purchased by the Buchholz Rogers Family Living Trust 2012, (c) 52,637 purchased by the Phan Rogers Trust, (d) 26,319 shares purchased by Christopher Hagerman, (e) 26,319 shares purchased by Joseph Rogers, (f) 26,319 shares purchased by Lisa M. Rogers, (g) 26,319 shares purchased by Michael J. Rogers, (h) 26,319 shares purchased by Molly Rogers, (i) 26,319 shares purchased by Peter Rogers and (j) 26,319 shares purchased by Sara Rogers, over which John E. Rogers exercises voting control.
(3) Includes the conversion of an aggregate principal and interest amount of $8.3 million of convertible notes into 3,824,695 shares of Series C convertible preferred stock.
(4) Includes the conversion of an aggregate principal and interest amount of $3.2 million of convertible notes into 1,479,773 shares of Series C convertible preferred stock.

Series D Preferred Stock Financing

In December 2014, we entered into a Series D convertible preferred stock purchase agreement, or the Series D purchase agreement, pursuant to which we issued and sold an aggregate of 19,012,173 shares of our Series D convertible preferred stock for approximately $2.70 per share, for aggregate consideration of approximately $51.4 million. The table below sets forth the number of shares of Series D convertible preferred stock issued to stockholders who held more than 5% of any class of our voting securities and their affiliates, to the extent they were issued more than $120,000 of our Series D convertible preferred stock. For each share of preferred stock set forth in the table below, the holder will receive, upon conversion, 0.72 of a share of our common stock upon the closing of this offering.

	Number of Shares of Series D Convertible Preferred Stock	Aggregate Purchase Price
Morningside Venture (VI) Investments Limited(1)	2,774,798	$ 7,500,001.51
John E. and Lois A. Rogers	731,072	$ 1,976,014.51
Entities affiliated with Fidelity Investments(2)	5,549,595	$ 15,000,000.32

(1) Dr. Chan and Ms. O'Brien are members of our board of directors who have been designated by MVIL.

(2) Consists of (a) 2,692,455 shares purchased by Fidelity Securities Fund: Fidelity OTC Portfolio. (b) 2,376,915 shares purchased by Fidelity Select Portfolios: Biotechnology Portfolio and (c) 480,225 shares purchased by Fidelity Advisors Series VII: Fidelity Advisor Biotechnology Fund.

Amended and Restated Voting Agreement

We have entered into an amended and restated voting agreement with certain holders of our common stock and preferred stock, including certain of our named executive officers and directors and entities with which certain of our directors are affiliated, with respect to the election of our directors and certain other matters. All of our current directors were elected pursuant to the terms of this agreement. The amended and restated voting agreement will terminate upon the closing of this offering. For more information, see "Management—Board Composition."

Amended and Restated Right of First Refusal and Co-Sale Agreement

We have entered into an amended and rested right of first refusal and co-sale agreement with certain holders of our common stock and preferred stock, including certain of our named executive officers and directors and entities with which certain of our directors are affiliated. This agreement provides the holders of preferred stock a right of purchase and a right of co-sale in respect of sales of securities by certain holders of our common stock and preferred stock. These rights of purchase and co-sale will terminate upon the closing of this offering.

Amended and Restated Investors' Rights Agreement

We have entered into an amended and restated investors' rights agreement with certain holders of our preferred stock, including certain of our directors and entities with which certain of our directors are affiliated. This agreement provides that the holders of common stock issuable upon conversion of our preferred stock have the right to demand that we file a registration statement or request that their shares of common stock be covered by a registration statement that we are otherwise filing. With respect to this offering, the registration rights have been validly waived. In addition to the registration rights, the second amended and restated investors' rights agreement provides for certain information rights and a right of first offer. The provisions of the second amended and restated investors' rights agreement, other than those relating to registration rights, will terminate upon the closing of this offering. For more information regarding this agreement, see "Description of Capital Stock—Registration Rights."

Indemnification Agreements

We have entered into indemnification agreements with each of our directors and executive officers. For more information regarding these agreements, see “Executive Compensation—Limitation on Liability and Indemnification Matters.”

Potential Insider Participation

JJDC, an existing stockholder, has indicated an interest in purchasing up to approximately $30.0 million of shares of our common stock in this offering at the initial public offering price. Certain other of our existing stockholders, including stockholders affiliated with our directors, have indicated an interest in purchasing up to an additional approximately $12.5 million of shares of our common stock in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters may determine to sell more, fewer or no shares in this offering to any of these parties, or any of these parties may determine to purchase more, fewer or no shares in this offering.

Policies and Procedures for Transactions with Related Persons

We have adopted a policy that our executive officers, directors, nominees for election as a director, beneficial owners of more than 5% of any class of our common stock and any members of the immediate family of any of the foregoing persons are not permitted to enter into a related person transaction with us without the prior consent of our audit committee. Any request for us to enter into a transaction with an executive officer, director, nominee for election as a director, beneficial owner of more than 5% of any class of our voting securities or any member of the immediate family of any of the foregoing persons, in which the amount involved exceeds $120,000 and such person would have a direct or indirect interest, must first be presented to our audit committee for review, consideration and approval. In approving or rejecting any such proposal, our audit committee is to consider the material facts of the transaction, including, but not limited to, whether the transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances and the extent of the related person’s interest in the transaction. All of the transactions described above were entered into prior to the adoption of such policy, but after presentation, consideration and approval by our board of directors.

PRINCIPAL STOCKHOLDERS

The following table sets forth, at March 31, 2015, information regarding beneficial ownership of our capital stock by:

- each person, or group of affiliated persons, known by us to beneficially own more than 5% of our common stock;
- each of our named executive officers;
- each of our directors; and
- all of our current executive officers and directors as a group.

Beneficial ownership is determined according to the rules of the SEC and generally means that a person has beneficial ownership of a security if he, she or it possesses sole or shared voting or investment power of that security, including options and warrants that are currently exercisable within 60 days of March 31, 2015. Except as indicated by the footnotes below, we believe, based on the information furnished to us, that the persons named in the table below have sole voting and investment power with respect to all shares of common stock shown that they beneficially own, subject to community property laws where applicable. The information does not necessarily indicate beneficial ownership for any other purpose, including for purposes of Sections 13(d) and 13(g) of the Securities Act.

Our calculation of the percentage of beneficial ownership prior to this offering is based on 52,340,204 shares of our common stock (including preferred stock on an as-converted to common stock basis) outstanding at March 31, 2015. We have based our calculation of the percentage of beneficial ownership after this offering on 59,006,870 shares of our common stock outstanding immediately after the closing of this offering and the concurrent private placement (assuming no exercise of the underwriters' option to purchase additional shares of common stock).

JJDC, an existing stockholder, has indicated an interest in purchasing up to approximately $30.0 million of shares of our common stock in this offering at the initial public offering price. Certain other of our existing stockholders, including stockholders affiliated with our directors, have indicated an interest in purchasing up to an additional approximately $12.5 million of shares of our common stock in this offering at the initial public offering price. The information set forth in the table below assumes the purchase of all of these shares in this offering by such stockholders, with each such stockholder purchasing the respective number of shares indicated in the footnotes to the table. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters may determine to sell more, fewer or no shares in this offering to any of these parties, or any of these parties may determine to purchase more, fewer or no shares in this offering.

Unless otherwise indicated, the address of each beneficial owner listed in the table below is c/o Aduro Biotech, Inc., 626 Bancroft Way, 3C, Berkeley, California 94710.

Name of beneficial owner	Number of Shares Beneficially Owned	Percentage of Shares Beneficially Owned	
		Before Offering	After Offering
5% Stockholders:			
Morningside Venture (VI) Investments Limited and Ultimate Keen Limited(1)	24,966,855	47.0%	42.6%
John E. and Lois A. Rogers(2)	6,365,717	12.1%	11.3%
Entities affiliated with Fidelity Investments(4)	3,995,707	7.6%	6.8%
Johnson & Johnson Development Corporation(5)	3,317,972	6.3%	9.0%
Executive Officers and Directors:			
Stephen T. Isaacs(6)	1,786,764	3.3%	2.9%
Gregory W. Schafer(7)	241,169	*	*
Thomas W. Dubensky, Jr.(8)	384,089	*	*
Gerald Chan(9)	4,799	*	*
Stephanie Monaghan O'Brien(10)	40,154	*	*
William M. Greenman(11)	40,152	*	*
Ross Haghighat(12)	1,260,153	2.4%	2.1%
Frank McCormick(13)	49,536	*	*
All executive officers and directors as a group (10 persons)(14)	4,354,993	7.9%	7.0%

* Represents beneficial ownership of less than 1% of the outstanding common stock.

(1) Consists of (a) 18,602,342 shares and 762,014 shares issuable upon the exercise of warrants held by Morningside Venture (VI) Investments Limited, or MVIL, and (b) 5,602,499 shares held by Ultimate Keen Limited, or UKL, which were acquired from MVIL. In addition, the percentage of shares beneficially owned after the offering assumes that MVIL has purchased 500,000 shares of our common stock in this offering at the assumed initial public offering price. MIVL and UKL have voted together in the past with respect to our voting securities and plan to continue to act together with respect to our voting securities. Yuk Lan Wong and Louise Mary Garbarino, the directors of MVIL, share voting and dispositive control over the shares held by MVIL. The address of MVIL is 2nd Floor, Le Prince de Galles, 3-5 Avenue des Citronniers, MC 98000, Monaco. Raymond Long Sing Tang and Jill Marie Franklin, the directors of Ultimate Keen Limited, or UKL, share voting and dispositive control over the shares held by UKL. The address of UKL is P.O. Box 957, Offshore Incorporations Centre, Road Town, Tortola, British Virgin Islands.

(2) Consists of (a) 5,844,701 shares and 212,953 shares issuable upon the exercise of warrants held by John E. Rogers and Lois A. Rogers, JTWROS, (b) 52,298 shares and 3,716 shares issuable upon the exercise of warrants held by the Buchholz Rogers Family Living Trust 2012, (c) 52,298 shares and 3,716 shares issuable upon the exercise of warrants held by the Phan Rogers Trust, (d) 26,149 shares and 1,856 shares issuable upon the exercise of warrants held by Christopher Hagerman, (e) 26,149 shares and 1,856 shares issuable upon the exercise of warrants held by Joseph Rogers, (f) 26,149 shares and 1,856 shares issuable upon the exercise of warrants held by Lisa M. Rogers, (g) 26,149 shares and 1,856 shares issuable upon the exercise of warrants held by Michael J. Rogers, (h) 26,149 shares and 1,856 shares issuable upon the exercise of warrants held by Molly Rogers, (i) 26,149 shares and 1,856 shares issuable upon the exercise of warrants held by Peter Rogers and (j) 26,149 shares and 1,856 shares issuable upon the exercise of warrants held by Sara Rogers, over which John E. Rogers exercises voting control. The address for John E. and Lois A. Rogers is 5110 North 40th Street, Suite 234, Phoenix, Arizona 85018. In addition, the percentage of shares beneficially owned after the offering assumes that John E. Rogers and Lois A. Rogers, JTWROS, have purchased 333,333 shares of our common stock in this offering at the assumed initial public offering price.

(3) Consists of (a) 1,938,567 shares held by Fidelity Securities Fund: Fidelity OTC Portfolio, (b) 1,711,378 shares held by Fidelity Select Portfolios: Biotechnology Portfolio and (c) 345,762 shares held by Fidelity Advisor Series VII: Fidelity Advisor Biotechnolgy Fund. These accounts are managed by direct or indirect subsidiaries of FMR LLC. Edward C. Johnson 3d is a Director and the Chairman of FMR LLC and Abigail P. Johnson is a Director, the Vice Chairman and the President of FMR LLC. Members of the family of Edward C. Johnson 3d, including Abigail P. Johnson, are the predominant owners, directly or through trusts, of Series B voting

common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B shareholders have entered into a shareholders' voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders' voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC. Neither FMR LLC nor Edward C. Johnson 3d nor Abigail P. Johnson has the sole power to vote or direct the voting of the shares owned directly by the various investment companies registered under the Investment Company Act, or the Fidelity Funds, advised by Fidelity Management & Research Company, a wholly owned subsidiary of FMR LLC, which power resides with the Fidelity Funds' Boards of Trustees. Fidelity Management & Research Company carries out the voting of the shares under written guidelines established by the Fidelity Funds' Boards of Trustees. The address for FMR LLC is 245 Summer Street, Boston, MA 02210.

(5) The board of directors of Johnson & Johnson Development Corporation, or JJDC, Linda M. Vogel, Manager, Operations of JJDC, exercises voting and dispositive control over the shares held by JJDC. The address of JJDC is 410 George Street, New Brunswick, NJ 08901. In addition, the percentage of share beneficially owned after the offering assumes that JJDC has purchased 2,000,000 shares of our common stock in this offering at the assumed initial public offering price.

(6) Includes (a) 1,632,077 shares issuable pursuant to stock options exercisable within 60 days of March 31, 2015, (b) 11,916 shares issuable upon the exercise of warrants.

(7) Includes (a) 203,573 shares issuable pursuant to stock options exercisable within 60 days of March 31, 2015, and (b) 3,317 shares issuable upon the exercise of a warrant.

(8) Consists of 384,089 shares issuable pursuant to stock options exercisable within 60 days of March 31, 2015.

(9) Consists of 4,799 shares issuable pursuant to stock options exercisable within 60 days of March 31, 2015.

(10) Consists of 40,154 shares issuable pursuant to stock options exercisable within 60 days of March 31, 2015.

(11) Consists of 40,152 shares issuable pursuant to stock options exercisable within 60 days of March 31, 2015.

(12) Consists of (a) 14,762 shares and 50,904 shares issuable pursuant to stock options exercisable within 60 days of March 31, 2015 held by Ross Haghighat, (b) 373,407 shares and 6,636 shares issuable upon the exercise of warrants held by Triton Holdings LLC, (c) 745,463 shares and 56,819 shares issuable upon the exercise of warrants held by Triton Systems, Inc. and (d) 12,162 shares held by Turnpike Properties, LLC, over which Ross Haghighat exercises voting and dispositive control.

(13) Consists of 49,536 shares issuable pursuant to stock options exercisable within 60 days of March 31, 2015.

(14) Includes 2,953,466 shares issuable pursuant to stock options exercisable within 60 days of March 31, 2015 and 78,688 shares issuable upon the exercise of warrants held by the directors and executive officers.

DESCRIPTION OF CAPITAL STOCK

General

The following description of our capital stock summarizes the most important terms of our capital stock as they are expected to be in effect upon the closing of this offering. The descriptions of our capital stock and certain provisions of our amended and restated certificate of incorporation and amended and restated bylaws are summaries and are qualified by reference to the amended and restated certificate of incorporation and the amended and restated bylaws that will be in effect immediately following the closing of this offering. Copies of these documents will be filed with the SEC as exhibits to our registration statement, of which this prospectus forms a part.

Our amended and restated certificate of incorporation provides for common stock and undesignated preferred stock, the rights, preferences and privileges of which may be designated from time to time by our board of directors.

Immediately following the closing of this offering, our authorized capital stock will consist of 310,000,000 shares, all with a par value of $0.0001 per share, of which 300,000,000 shares will be designated as common stock and 10,000,000 shares will be designated as preferred stock.

At December 31, 2014, we had outstanding 50,479,916 shares of common stock, which assumes the conversion of all shares of preferred stock outstanding at December 31, 2014 into 50,117,919 shares of common stock upon the closing of this offering. Our outstanding capital stock was held by approximately 244 stockholders of record at December 31, 2014. In addition, at December 31, 2014, there were outstanding options to acquire 5,970,382 shares of our common stock.

Common Stock

The holders of our common stock are entitled to one vote per share on all matters submitted to a vote of our stockholders. Subject to preferences that may be applicable to any preferred stock outstanding at the time, the holders of outstanding shares of common stock are entitled to receive ratably any dividends declared by our board of directors out of assets legally available therefor. In the event that we liquidate, dissolve or wind up, holders of our common stock are entitled to share ratably in all assets remaining after payment of liabilities and the liquidation preference of any then outstanding shares of preferred stock. Holders of common stock have no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of common stock are, and all shares of common stock to be outstanding upon completion of this offering will be, fully paid and nonassessable.

Preferred Stock

At December 31, 2014, there were 69,608,339 shares of our preferred stock outstanding, which will convert into 50,117,919 shares of our common stock upon the closing of this offering.

Upon the closing of this offering, our board of directors may, without further action by our stockholders, fix the rights, preferences, privileges and restrictions of up to an aggregate of 10,000,000 shares of preferred stock in one or more series and authorize their issuance, subject to the approval rights of the common stock described above. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking fund terms and the number of shares constituting any series or the designation of such series, any or all of which may be greater than the rights of our common stock or common stock. The issuance of our preferred stock could adversely affect the voting power of holders of our common stock or common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change of control or other corporate action. Upon the closing of this offering, no shares of preferred stock will be outstanding, and we have no present plan to issue any shares of preferred stock.

Registration Rights

We are party to an amended and restated investors' rights agreement that provides that holders of our preferred stock, including certain holders of 5% of our capital stock and entities affiliated with certain of our directors, have certain registration rights, as set forth below. The registration of shares of our common stock pursuant to the exercise of registration rights described below would enable the holders to sell these shares without restriction under the Securities Act when the applicable registration statement is declared effective. We will pay the registration expenses, other than the underwriting discount, of the shares registered pursuant to the demand, piggyback and Form S-3 registrations described below.

Generally, in an underwritten offering, the managing underwriter, if any, has the right, subject to specified conditions, to limit the number of shares such holders may include. The demand, piggyback and Form S-3 registration rights described below will expire upon the earlier of five years following the completion of this offering, or when all investors, considered with their affiliates, can sell all of their shares in a 90-day period under Rule 144.

Demand Registration Rights

The holders of an aggregate of 47,691,942 shares of common stock outstanding at December 31, 2014, including shares issuable upon conversion of outstanding preferred stock, giving effect to the company conversion as if it occurred on such date, will be entitled to certain demand registration rights. At any time beginning after the earlier of December 19, 2016 or six months following the date of this prospectus, the holders of at least (a) a majority of our common stock issued or issuable upon conversion of our Series C preferred stock and Series D preferred stock, voting together as a single class, or (b) a majority of our common stock issued or issuable upon conversion of our Series B preferred stock, on not more than two occasions, request that we register all or a portion of their shares, subject to certain specified exceptions. Such request for registration must cover such number of shares such that the anticipated aggregate offering price, net of the underwriting discount, would equal or exceed $5.0 million.

Piggyback Registration Rights

In connection with this offering, the holders of an aggregate of 47,701,554 shares of common stock outstanding at December 31, 2014, including shares issuable upon conversion of outstanding preferred stock, giving effect to the company conversion as if it occurred on such date, were entitled to, and the necessary percentage of holders waived, their rights to notice of this offering and to include their shares of registrable securities in this offering. In the event that we propose to register any of our securities under the Securities Act in another offering, either for our own account or for the account of other security holders, the holders of these shares will be entitled to certain "piggyback" registration rights allowing them to include their shares in such registration, subject to certain marketing and other limitations. As a result, whenever we propose to file a registration statement under the Securities Act, including a registration statement on Form S-3 as discussed below, other than with respect to a demand registration or a registration statement on Forms S-4 or S-8 or related to stock issued upon conversion of debt securities, the holders of these shares are entitled to notice of the registration and have the right, subject to limitations that the underwriters may impose on the number of shares included in the registration, to include their shares in the registration.

Form S-3 Registration Rights

The holders of an aggregate of 47,691,942 shares of common stock outstanding at December 31, 2014, including shares issuable upon conversion of outstanding preferred stock, giving effect to the company conversion as if it occurred on such date, will be entitled to certain Form S-3 registration rights. Any holder or holders of these shares can make a request that we register their shares on Form S-3 if we are qualified to file a registration statement on Form S-3, subject to certain specified exceptions. Such request for registration on Form S-3 must cover securities the aggregate offering price of which, before payment of the underwriting discount, equals or exceeds $1.5 million.

Anti-Takeover Provisions

Certificate of Incorporation and Bylaws to be in Effect Immediately Following the Closing of this Offering

Because our stockholders do not have cumulative voting rights, our stockholders holding a majority of the outstanding shares of common stock outstanding will be able to elect all of our directors. Our amended and restated certificate of incorporation and amended and restated bylaws to be effective immediately following the closing of this offering will provide that all stockholder actions must be effected at a duly called meeting of stockholders and not by written consent. A special meeting of stockholders may be called by holders of a majority of our common stock and common stock, voting together as a single class, or by the majority of our whole board of directors, or our chief executive officer.

As described above in "Management—Board Composition," in accordance with our amended and restated certificate of incorporation to be filed in connection with this offering, immediately after this offering, our board of directors will be divided into three classes with staggered three-year terms.

The foregoing provisions will make it more difficult for our existing stockholders to replace our board of directors as well as for another party to obtain control of us by replacing our board of directors. Since our board of directors has the power to retain and discharge our officers, these provisions could also make it more difficult for existing stockholders or another party to effect a change in management. In addition, the authorization of undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change our control.

These provisions are intended to enhance the likelihood of continued stability in the composition of our board of directors and its policies and to discourage certain types of transactions that may involve an actual or threatened acquisition of us. These provisions are also designed to reduce our vulnerability to an unsolicited acquisition proposal and to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for our shares and may have the effect of deterring hostile takeovers or delaying changes in our control or management. As a consequence, these provisions also may inhibit fluctuations in the market price of our stock that could result from actual or rumored takeover attempts.

Section 203 of the Delaware General Corporation Law

We are subject to Section 203 of the Delaware General Corporation Law, which prohibits a Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years after the date that such stockholder became an interested stockholder, with the following exceptions:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon closing of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction began, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned by (i) persons who are directors and also officers and (ii) employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 $^{2}/_{3}$% of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 defines business combination to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- any transaction involving the corporation that has the effect of increasing the proportionate share of the stock or any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loss, advances, guarantees, pledges or other financial benefits by or through the corporation.

In general, Section 203 defines an "interested stockholder" as an entity or person who, together with the person's affiliates and associates, beneficially owns, or within three years prior to the time of determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation.

A Delaware corporation may "opt out" of these provisions with an express provision in its certificate of incorporation. We have not opted out of these provisions, which may discourage or prevent mergers or other takeover or change of control attempts of our company.

Choice of Forum

Our amended and restated certificate of incorporation will provide that the Court of Chancery of the State of Delaware will be the exclusive forum for any derivative action or proceeding brought on our behalf; any action asserting a breach of fiduciary duty; any action asserting a claim against us arising pursuant to the Delaware General Corporation Law, our amended and restated certificate of incorporation or our bylaws; or any action asserting a claim against us that is governed by the internal affairs doctrine.

Limitations of Liability and Indemnification

See "Executive Compensation—Limitation on Liability and Indemnification Matters."

Listing

We intend to apply to have our common stock approved for listing on the NASDAQ Global Market under the symbol "ADRO."

Transfer Agent and Registrar

Upon the closing of this offering, the transfer agent and registrar for our common stock will be Computershare Trust Company, N.A. The transfer agent and registrar's address is 250 Royall Street, Canton, Massachusetts 02021.

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for our capital stock. Future sales of our common stock in the public market, or the availability of such shares for sale in the public market, could adversely affect market prices prevailing from time to time. As described below, only a limited number of shares will be available for sale shortly after this offering due to contractual and legal restrictions on resale. Nevertheless, sales of our common stock in the public market after such restrictions lapse, or the perception that those sales may occur, could adversely affect the prevailing market price at such time and our ability to raise equity capital in the future.

Based on the number of shares outstanding at December 31, 2014, upon the closing of this offering, shares of common stock will be outstanding, assuming no exercise of the underwriters' option to purchase additional shares of common stock and no exercise of outstanding options. Of the outstanding shares, all of the shares sold in this offering will be freely tradable, except that any shares held by our affiliates, as that term is defined in Rule 144 under the Securities Act, may only be sold in compliance with the limitations described below.

The remaining shares of our common stock outstanding after this offering are restricted securities as such term is defined in Rule 144 under the Securities Act and are subject to lock-up agreements with us as described below. Following the expiration of the lock-up period, restricted securities may be sold in the public market only if registered or if they qualify for an exemption from registration under Rule 144 or 701 promulgated under the Securities Act, described in greater detail below.

Rule 144

In general, a person who has beneficially owned restricted shares of our common stock for at least six months would be entitled to sell their securities provided that (i) such person is not deemed to have been one of our affiliates at the time of, or at any time during the 90 days preceding, a sale and (ii) we are subject to the Exchange Act periodic reporting requirements for at least 90 days before the sale. Persons who have beneficially owned restricted shares of our common stock for at least six months but who are our affiliates at the time of, or any time during the 90 days preceding, a sale, would be subject to additional restrictions, by which such person would be entitled to sell within any three-month period only a number of securities that does not exceed the greater of either of the following:

- 1% of the number of shares of our common stock outstanding after this offering, which will equal 571,466 shares assuming no exercise of the underwriters' option to purchase additional shares of common stock; or
- the average weekly trading volume of our common stock on the NASDAQ Global Market during the four calendar weeks preceding the filing of a notice on Form 144 with respect to the sale;

provided, in each case, that we are subject to the Exchange Act periodic reporting requirements for at least 90 days before the sale. Such sales both by affiliates and by non-affiliates must also comply with the manner of sale, current public information and notice provisions of Rule 144.

Rule 701

Rule 701 under the Securities Act, as in effect on the date of this prospectus, permits re-sales of shares in reliance upon Rule 144 but without compliance with certain restrictions of Rule 144, including the holding period requirement. Most of our employees, executive officers, directors or consultants who purchased shares under a written compensatory plan or contract may be entitled to rely on the resale provisions of Rule 701, but all holders of Rule 701 shares are required to wait until 90 days after the date of this prospectus before selling their shares. However, substantially all Rule 701 shares are subject to lock-up agreements as described below and under "Underwriting" and will become eligible for sale at the expiration of those agreements.

Lock-Up Agreements

We, our directors and executive officers, and substantially all of our stockholders have agreed with the underwriters that for a period of 180 days following the date of this prospectus, subject to certain exceptions, we and they will not, directly or indirectly, offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise dispose of or hedge any of our shares of common stock, any options or warrants to purchase shares of our common stock, or any securities convertible into, or exchangeable for or that represent the right to receive shares of our common stock. Merrill, Lynch, Pierce, Fenner & Smith Incorporated and Leerink Partners LLC may, in their sole discretion, at any time, release all or any portion of the shares from the restrictions in such agreement.

Employees can only sell vested shares. Employees who do not hold vested shares, including shares subject to options, upon expiration of these selling restrictions will not be able to sell shares until they vest.

Registration Rights

On the date beginning 181 days after the date of this prospectus, the holders of approximately 47,701,554 shares of our common stock, or their transferees, will be entitled to certain rights with respect to the registration of those shares under the Securities Act. For a description of these registration rights, see “Description of Capital Stock—Registration Rights.” If these shares are registered, they will be freely tradable without restriction under the Securities Act.

Equity Incentive Plans

As soon as practicable after the closing of this offering, we intend to file a Form S-8 registration statement under the Securities Act to register shares of our common stock issued or reserved for issuance under our equity compensation plans and agreements. This registration statement will become effective immediately upon filing, and shares covered by this registration statement will thereupon be eligible for sale in the public markets, subject to vesting restrictions, the lock-up agreements described above and Rule 144 limitations applicable to affiliates. For a more complete discussion of our equity compensation plans, see “Executive Compensation—Employee Benefit Plans.”

MATERIAL U.S. FEDERAL INCOME AND ESTATE TAX CONSEQUENCES TO NON-U.S. HOLDERS OF OUR COMMON STOCK

The following is a summary of the material U.S. federal income and estate tax consequences to non-U.S. holders (as defined below) of the acquisition, ownership and disposition of our common stock issued pursuant to this offering. This discussion is not a complete analysis of all potential U.S. federal income tax consequences relating thereto, does not address the potential application of the Medicare contribution tax and does not address any gift tax consequences or any tax consequences arising under any state, local or foreign tax laws, or any other U.S. federal tax laws. This discussion is based on the Code, Treasury Regulations promulgated thereunder, judicial decisions and published rulings and administrative pronouncements of the Internal Revenue Service, or IRS, all as in effect as of the date of this prospectus. These authorities may change, possibly retroactively, resulting in U.S. federal income tax consequences different from those discussed below. We have not requested a ruling from the IRS with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS will agree with such statements and conclusions.

This discussion is limited to non-U.S. holders who purchase our common stock issued pursuant to this offering and who hold our common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all of the U.S. federal income tax consequences that may be relevant to a particular holder in light of such holder's particular circumstances. This discussion also does not consider any specific facts or circumstances that may be relevant to holders subject to special rules under the U.S. federal income tax laws, including, without limitation, certain former citizens or long-term residents of the United States, partnerships or other pass-through entities, "controlled foreign corporations," "passive foreign investment companies," corporations that accumulate earnings to avoid U.S. federal income tax, banks, financial institutions, investment funds, insurance companies, brokers, dealers or traders in securities, tax-exempt organizations, tax-qualified retirement plans, persons subject to the alternative minimum tax, persons that own, or have owned, actually or constructively, more than 5% of our common stock and persons holding our common stock as part of a hedging or conversion transaction or straddle, or a constructive sale, or other risk reduction strategy.

If an entity or arrangement that is classified as a partnership for U.S. federal income tax purposes holds our common stock, the U.S. federal income tax treatment of a partner will generally depend on the status of the partner and the activities of the partnership. Partnerships holding our common stock and the partners in such partnerships are urged to consult their tax advisors as to particular U.S. federal income tax consequences to them of holding and disposing of our common stock.

PROSPECTIVE INVESTORS SHOULD CONSULT THEIR TAX ADVISORS REGARDING THE PARTICULAR U.S. FEDERAL INCOME TAX CONSEQUENCES TO THEM OF ACQUIRING, OWNING AND DISPOSING OF OUR COMMON STOCK, AS WELL AS ANY TAX CONSEQUENCES ARISING UNDER ANY STATE, LOCAL OR FOREIGN TAX LAWS, ANY OTHER U.S. FEDERAL TAX LAWS OR ANY APPLICABLE TAX TREATY.

Definition of Non-U.S. Holder

For purposes of this discussion, a non-U.S. holder is any beneficial owner of our common stock that is not a "U.S. person" or a partnership (including any entity or arrangement treated as a partnership) for U.S. federal income tax purposes. A U.S. person is any of the following:

- an individual citizen or resident of the United States;
- a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) created or organized under the laws of the United States, any state thereof or the District of Columbia;

- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or

- a trust (1) whose administration is subject to the primary supervision of a U.S. court and which has one or more U.S. persons who have the authority to control all substantial decisions of the trust, or (2) that has a valid election in effect under applicable Treasury Regulations to be treated as a U.S. person.

Distributions on our Common Stock

As described in the section entitled "Dividend Policy," we do not anticipate paying any cash dividends in the foreseeable future. However, if we make cash or other property distributions on our common stock, such distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Amounts not treated as dividends for U.S. federal income tax purposes will constitute a return of capital and will first be applied against and reduce a holder's tax basis in our common stock, but not below zero. Any excess will be treated as gain realized on the sale or other disposition of our common stock and will be treated as described under the section of this prospectus titled "—Gain on Disposition of our Common Stock" below.

Dividends (out of earnings and profits) paid to a non-U.S. holder of our common stock generally will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends, or such lower rate specified by an applicable income tax treaty. To receive the benefit of a reduced treaty rate, a non-U.S. holder must furnish to us or our paying agent a valid IRS Form W-8BEN (in the case of an individual), IRS Form W-8BEN-E (in the case of an entity) or applicable successor form, including a U.S. taxpayer identification number and certifying such holder's qualification for the reduced rate. This certification must be provided to us or our paying agent prior to the payment of dividends and must be updated periodically. If the non-U.S. holder holds the stock through a financial institution or other agent acting on the non-U.S. holder's behalf, the non-U.S. holder will be required to provide appropriate documentation to the agent, which then will be required to provide certification to us or our paying agent, either directly or through other intermediaries.

Non-U.S. holders that do not timely provide the required certification, but that qualify for a reduced treaty rate, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS.

If a non-U.S. holder holds our common stock in connection with the conduct of a trade or business in the United States, and dividends paid on our common stock are effectively connected with such holder's U.S. trade or business (and are attributable to such holder's permanent establishment in the United States if required by an applicable tax treaty), the non-U.S. holder will be exempt from U.S. federal withholding tax. To claim the exemption, the non-U.S. holder must generally furnish a properly executed IRS Form W-8ECI (or applicable successor form).

Any dividends paid on our common stock that are effectively connected with a non-U.S. holder's U.S. trade or business (and if required by an applicable income tax treaty, are attributable to a permanent establishment maintained by the non-U.S. holder in the United States) generally will be subject to U.S. federal income tax on a net income basis at the regular graduated U.S. federal income tax rates in the same manner as if such holder were a resident of the United States. A non-U.S. holder that is a foreign corporation also may be subject to an additional branch profits tax equal to 30% (or such lower rate specified by an applicable income tax treaty) of its effectively connected earnings and profits for the taxable year, as adjusted for certain items. Non-U.S. holders should consult their tax advisors regarding any applicable income tax treaties that may provide for different rules.

Gain on Disposition of our Common Stock

Subject to the discussion below regarding backup withholding and FATCA, a non-U.S. holder generally will not be subject to U.S. federal income tax on any gain realized upon the sale or other disposition of our common stock, unless:

- the gain is effectively connected with the non-U.S. holder's conduct of a trade or business in the United States, and if required by an applicable income tax treaty, is attributable to a permanent establishment maintained by the non-U.S. holder in the United States;
- the non-U.S. holder is a nonresident alien individual present in the United States for 183 days or more during the taxable year of the disposition, and certain other requirements are met; or
- our common stock constitutes a "United States real property interest" by reason of our status as a United States real property holding corporation, or USRPHC, for U.S. federal income tax purposes at any time within the shorter of the five-year period preceding the disposition and the non-U.S. holder's holding period for our common stock, and our common stock is not regularly traded on an established securities market during the calendar year in which the sale or other disposition occurs.

The determination of whether we are a USRPHC depends on the fair market value of our U.S. real property interests relative to the fair market value of our other trade or business assets and our foreign real property interests. We believe we are not currently and do not anticipate becoming a USRPHC for U.S. federal income tax purposes.

Gain described in the first bullet point above generally will be subject to U.S. federal income tax on a net income basis at the regular graduated U.S. federal income tax rates in the same manner as if such holder were a resident of the United States. A non-U.S. holder that is a foreign corporation may also be subject to an additional branch profits tax equal to 30% (or such lower rate specified by an applicable income tax treaty) of its effectively connected earnings and profits for the taxable year, as adjusted for certain items. Non-U.S. holders should consult their tax advisors regarding any applicable income tax treaties that may provide for different rules.

Gain described in the second bullet point above will be subject to U.S. federal income tax at a flat 30% rate (or such lower rate specified by an applicable income tax treaty), but may be offset by certain U.S.-source capital losses (even though the individual is not considered a resident of the United States), provided that the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses.

Information Reporting and Backup Withholding

We must report annually to the IRS and to each non-U.S. holder the amount of dividends on our common stock paid to such holder and the amount of any tax withheld with respect to those dividends. These information reporting requirements apply even if no withholding was required because the dividends were effectively connected with the holder's conduct of a U.S. trade or business, or withholding was reduced or eliminated by an applicable income tax treaty. This information also may be made available under a specific treaty or agreement with the tax authorities in the country in which the non-U.S. holder resides or is established. Backup withholding, currently at a 28% rate, generally will not apply to payments to a non-U.S. holder of dividends on or the gross proceeds of a disposition of our common stock provided the non-U.S. holder furnishes the required certification as to its non-U.S. status, such as by providing a valid IRS Form W-8BEN, IRS Form W-8BEN-E or IRS Form W-8ECI, or certain other requirements are met. Notwithstanding the foregoing, backup withholding may apply if the payor has actual knowledge, or reason to know, that the holder is a U.S. person who is not an exempt recipient.

Backup withholding is not an additional tax. If any amount is withheld under the backup withholding rules, the non-U.S. holder should consult with a U.S. tax advisor regarding the possibility of and procedure for obtaining a refund or a credit against the non-U.S. holder's U.S. federal income tax liability, if any.

Foreign Accounts

Sections 1471 through 1474 of the Code (commonly referred to as FATCA) will impose a U.S. federal withholding tax of 30% on certain payments, including dividends on and the gross proceeds of a disposition of our common stock, made to a "foreign financial institution" (as specially defined under these rules) unless such institution enters into an agreement with the U.S. government to withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding U.S. account holders of such institution (which includes certain equity and debt holders of such institution, as well as certain account holders that are foreign entities with U.S. owners) or an exemption applies. FATCA also generally will impose a U.S. federal withholding tax of 30% on certain payments, including dividends on and the gross proceeds of a disposition of our common stock, made to a non-financial foreign entity unless such entity provides the withholding agent a certification identifying the direct and indirect U.S. owners of the entity or an exemption applies. An intergovernmental agreement between the United States and an applicable foreign country may modify these requirements. Under certain circumstances, a non-U.S. holder might be eligible for refunds or credits of such taxes. These withholding taxes currently may be imposed on dividends paid on our common stock. These withholding taxes may also be imposed on gross proceeds from sales or other dispositions of our common stock after December 31, 2016.

Prospective investors are encouraged to consult with their own tax advisors regarding the possible implications of these rules on their investment in our common stock.

Estate Tax

Individual non-U.S. holders and entities whose property is potentially includible in such an individual's gross estate for U.S. federal estate tax purposes (for example, a trust funded by such an individual and with respect to which the individual has retained certain interests or powers), should note that, absent an applicable treaty benefit, our common stock generally will be treated as U.S. situs property subject to U.S. federal estate tax.

UNDERWRITING

Merrill Lynch, Pierce, Fenner & Smith Incorporated and Leerink Partners LLC are acting as representatives of each of the underwriters named below. Subject to the terms and conditions set forth in an underwriting agreement among us and the underwriters, we have agreed to sell to the underwriters, and each of the underwriters has agreed, severally and not jointly, to purchase from us, the number of shares of common stock set forth opposite its name below.

Underwriter	Number of Shares
Merrill Lynch, Pierce, Fenner & Smith Incorporated	
Leerink Partners LLC	
William Blair & Company, L.L.C.	
Canaccord Genuity Inc.	
Total	5,000,000

Subject to the terms and conditions set forth in the underwriting agreement, the underwriters have agreed, severally and not jointly, to purchase all of the shares sold under the underwriting agreement if any of these shares are purchased. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the nondefaulting underwriters may be increased or the underwriting agreement may be terminated.

We have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act, or to contribute to payments the underwriters may be required to make in respect of those liabilities.

The underwriters are offering the shares, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel, including the validity of the shares, and other conditions contained in the underwriting agreement, such as the receipt by the underwriters of officer's certificates and legal opinions. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Commissions and Discounts

The representatives have advised us that the underwriters propose initially to offer the shares to the public at the public offering price set forth on the cover page of this prospectus and to dealers at that price less a concession not in excess of $ per share. After the initial offering, the public offering price, concession or any other term of the offering may be changed.

The following table shows the public offering price, underwriting discount and proceeds before expenses to us. The information assumes either no exercise or full exercise by the underwriters of their option to purchase additional shares.

	Per Share	Without Option	With Option
Public offering price	$	$	$
Underwriting discount	$	$	$
Proceeds, before expenses, to Aduro Biotech, Inc.	$	$	$

The expenses of the offering, not including the underwriting discount, are estimated at $3.0 million and are payable by us. We have also agreed to reimburse the underwriters for certain expenses in an amount up to $37,500.

JJDC, an existing stockholder, has indicated an interest in purchasing up to approximately $30.0 million of shares of our common stock in this offering at the initial public offering price. Certain other of our existing stockholders, including stockholders affiliated with our directors, have indicated an interest in purchasing up to an additional approximately $12.5 million of shares of our common stock in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters may determine to sell more, fewer or no shares in this offering to any of these parties, or any of these parties may determine to purchase more, fewer or no shares in this offering.

Option to Purchase Additional Shares

We have granted an option to the underwriters, exercisable for 30 days after the date of this prospectus, to purchase up to 750,000 additional shares at the public offering price, less the underwriting discount. If the underwriters exercise this option, each will be obligated, subject to conditions contained in the underwriting agreement, to purchase a number of additional shares proportionate to that underwriter's initial amount reflected in the above table.

Reserved Shares

At our request, the underwriters have reserved for sale, at the initial public offering price, up to shares offered by this prospectus for sale to certain of our directors, officers, employees, business associates and related persons through a Reserved Share Program. If these persons purchase reserved shares, this will reduce the number of shares available for sale to the general public. Any reserved shares that are not so purchased will be offered by the underwriters to the general public on the same terms as the other shares offered by this prospectus.

No Sales of Similar Securities

We, our executive officers and directors and our other existing security holders have agreed not to sell or transfer any common stock or securities convertible into, exchangeable for, exercisable for, or repayable with common stock, for 180 days after the date of this prospectus without first obtaining the written consent of Merrill Lynch, Pierce, Fenner & Smith Incorporated and Leerink Partners LLC. Specifically, we and these other persons have agreed, with certain limited exceptions, not to directly or indirectly

- offer, pledge, sell or contract to sell any common stock,
- sell any option or contract to purchase any common stock,
- purchase any option or contract to sell any common stock,
- grant any option, right or warrant for the sale of any common stock,
- lend or otherwise dispose of or transfer any common stock,
- request or demand that we file a registration statement related to the common stock, or
- enter into any swap or other agreement that transfers, in whole or in part, the economic consequence of ownership of any common stock whether any such swap or transaction is to be settled by delivery of shares or other securities, in cash or otherwise.

This lock-up provision applies to common stock and to securities convertible into or exchangeable or exercisable for or repayable with common stock. It also applies to common stock owned now or acquired later by the person executing the agreement or for which the person executing the agreement later acquires the power of disposition.

NASDAQ Global Market Listing

We expect the shares to be approved for listing on the NASDAQ Global Market, subject to notice of issuance, under the symbol "ADRO."

Before this offering, there has been no public market for our common stock. The initial public offering price will be determined through negotiations between us and the representatives. In addition to prevailing market conditions, the factors to be considered in determining the initial public offering price are

- the valuation multiples of publicly traded companies that the representatives believe to be comparable to us,
- our financial information,
- the history of, and the prospects for, our company and the industry in which we compete,
- an assessment of our management, its past and present operations, and the prospects for, and timing of, our future revenues,
- the present state of our development and
- the above factors in relation to market values and various valuation measures of other companies engaged in activities similar to ours.

An active trading market for the shares may not develop. It is also possible that after the offering the shares will not trade in the public market at or above the initial public offering price.

The underwriters do not expect to sell more than 5% of the shares in the aggregate to accounts over which they exercise discretionary authority.

Price Stabilization, Short Positions and Penalty Bids

Until the distribution of the shares is completed, SEC rules may limit underwriters and selling group members from bidding for and purchasing our common stock. However, the representatives may engage in transactions that stabilize the price of the common stock, such as bids or purchases to peg, fix or maintain that price.

In connection with the offering, the underwriters may purchase and sell our common stock in the open market. These transactions may include short sales, purchases on the open market to cover positions created by short sales and stabilizing transactions. Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering. "Covered" short sales are sales made in an amount not greater than the underwriters' option to purchase additional shares described above. The underwriters may close out any covered short position by either exercising their option to purchase additional shares or purchasing shares in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through the option granted to them. "Naked" short sales are sales in excess of such option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if the underwriters are concerned that there may be downward pressure on the price of our common stock in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions consist of various bids for or purchases of shares of common stock made by the underwriters in the open market prior to the completion of the offering.

The underwriters may also impose a penalty bid. This occurs when a particular underwriter repays to the underwriters a portion of the underwriting discount received by it because the representatives have repurchased shares sold by or for the account of such underwriter in stabilizing or short covering transactions.

Similar to other purchase transactions, the underwriters' purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. The underwriters may conduct these transactions on the NASDAQ Global Market, in the over-the-counter market or otherwise.

Neither we nor any of the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our common stock. In addition, neither we nor any of the underwriters make any representation that the representatives will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

Electronic Distribution

In connection with the offering, certain of the underwriters or securities dealers may distribute prospectuses by electronic means, such as e-mail.

Other Relationships

Some of the underwriters and their affiliates have engaged in, and may in the future engage in, investment banking and other commercial dealings in the ordinary course of business with us or our affiliates. They have received, or may in the future receive, customary fees and commissions for these transactions.

In addition, in the ordinary course of their business activities, the underwriters and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. The underwriters and their affiliates may also make investment recommendations and/or publish or express independent research views in respect of such securities or financial instruments and may hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Notice to Prospective Investors in the European Economic Area

In relation to each Member State of the European Economic Area, each a Relevant Member State, no offer of shares may be made to the public in that Relevant Member State other than:

(a) to any legal entity which is a qualified investor as defined in the Prospectus Directive;

(b) to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representatives; or

(c) in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of shares shall require us or the representatives to publish a prospectus pursuant to Article 3 of the Prospectus Directive or supplement a prospectus pursuant to Article 16 of the Prospectus Directive.

Each person in a Relevant Member State who initially acquires any shares or to whom any offer is made will be deemed to have represented, acknowledged and agreed that it is a "qualified investor" within the meaning of the law in that Relevant Member State implementing Article 2(1)(e) of the Prospectus Directive. In the case of any shares being offered to a financial intermediary as that term is used in Article 3(2) of the Prospectus Directive, each such financial intermediary will be deemed to have represented, acknowledged and agreed that

the shares acquired by it in the offer have not been acquired on a non-discretionary basis on behalf of, nor have they been acquired with a view to their offer or resale to, persons in circumstances which may give rise to an offer of any shares to the public other than their offer or resale in a Relevant Member State to qualified investors as so defined or in circumstances in which the prior consent of the representatives has been obtained to each such proposed offer or resale.

We, the representatives and their affiliates will rely upon the truth and accuracy of the foregoing representations, acknowledgements and agreements.

This prospectus has been prepared on the basis that any offer of shares in any Relevant Member State will be made pursuant to an exemption under the Prospectus Directive from the requirement to publish a prospectus for offers of shares. Accordingly any person making or intending to make an offer in that Relevant Member State of shares which are the subject of the offering contemplated in this prospectus may only do so in circumstances in which no obligation arises for us or any of the underwriters to publish a prospectus pursuant to Article 3 of the Prospectus Directive in relation to such offer. Neither we nor the underwriters have authorized, nor do they authorize, the making of any offer of shares in circumstances in which an obligation arises for us or the underwriters to publish a prospectus for such offer.

For the purpose of the above provisions, the expression "an offer to the public" in relation to any shares in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the shares to be offered so as to enable an investor to decide to purchase or subscribe the shares, as the same may be varied in the Relevant Member State by any measure implementing the Prospectus Directive in the Relevant Member State and the expression "Prospectus Directive" means Directive 2003/71/EC (including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member States) and includes any relevant implementing measure in the Relevant Member State and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

Notice to Prospective Investors in the United Kingdom

In addition, in the United Kingdom, this document is being distributed only to, and is directed only at, and any offer subsequently made may only be directed at persons who are "qualified investors" (as defined in the Prospectus Directive) (i) who have professional experience in matters relating to investments falling within Article 19 (5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended, or the Order, and/or (ii) who are high net worth companies (or persons to whom it may otherwise be lawfully communicated) falling within Article 49(2)(a) to (d) of the Order (all such persons together being referred to as "relevant persons"). This document must not be acted on or relied on in the United Kingdom by persons who are not relevant persons. In the United Kingdom, any investment or investment activity to which this document relates is only available to, and will be engaged in with, relevant persons.

Notice to Prospective Investors in Switzerland

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or SIX, or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, us, the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory

Authority FINMA, or FINMA, and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes, or CISA. The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

Notice to Prospective Investors in the Dubai International Financial Centre

This prospectus relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority, or DFSA. This prospectus is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus nor taken steps to verify the information set forth herein and has no responsibility for the prospectus. The shares to which this prospectus relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the shares offered should conduct their own due diligence on the shares. If you do not understand the contents of this prospectus you should consult an authorized financial advisor.

Notice to Prospective Investors in Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission, or ASIC, in relation to the offering. This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001, or the Corporations Act, and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares may only be made to persons, or the Exempt Investors, who are “sophisticated investors” (within the meaning of section 708(8) of the Corporations Act), “professional investors” (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares without disclosure to investors under Chapter 6D of the Corporations Act.

The shares applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring shares must observe such Australian on-sale restrictions.

This prospectus contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

Notice to Prospective Investors in Hong Kong

The shares have not been offered or sold and will not be offered or sold in Hong Kong, by means of any document, other than (a) to “professional investors” as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong and any rules made under that Ordinance; or (b) in other circumstances which do not result in the document being a “prospectus” as defined in the Companies Ordinance (Cap. 32) of Hong Kong or which do not constitute an offer to the public within the meaning of that Ordinance. No advertisement, invitation or document relating to the shares has been or may be issued or has been or may be in the possession of any person for the purposes of issue, whether in Hong Kong or elsewhere, which is directed at, or the contents of which are

likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the Securities and Futures Ordinance and any rules made under that Ordinance.

Notice to Prospective Investors in Japan

The shares have not been and will not be registered under the Financial Instruments and Exchange Law of Japan (Law No. 25 of 1948, as amended) and, accordingly, will not be offered or sold, directly or indirectly, in Japan, or for the benefit of any Japanese Person or to others for re-offering or resale, directly or indirectly, in Japan or to any Japanese Person, except in compliance with all applicable laws, regulations and ministerial guidelines promulgated by relevant Japanese governmental or regulatory authorities in effect at the relevant time. For the purposes of this paragraph, "Japanese Person" shall mean any person resident in Japan, including any corporation or other entity organized under the laws of Japan.

Notice to Prospective Investors in Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA, (ii) to a relevant person pursuant to Section 275(1), or any person pursuant to Section 275(1A), and in accordance with the conditions specified in Section 275, of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

(a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

(b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the shares pursuant to an offer made under Section 275 of the SFA except:

(a) to an institutional investor or to a relevant person defined in Section 275(2) of the SFA, or to any person arising from an offer referred to in Section 275(1A) or Section 276(4)(i)(B) of the SFA;

(b) where no consideration is or will be given for the transfer;

(c) where the transfer is by operation of law;

(d) as specified in Section 276(7) of the SFA; or

(e) as specified in Regulation 32 of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2005 of Singapore.

LEGAL MATTERS

Cooley LLP of Palo Alto, California will pass upon the validity of the shares of common stock offered hereby. The underwriters are being represented by Latham & Watkins LLP of Menlo Park, California in connection with the offering.

EXPERTS

The financial statements included in this prospectus have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report appearing herein and elsewhere in the registration statement of which this prospectus forms a part. Such financial statements are included in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to this offering of our common stock. This prospectus, which constitutes a part of the registration statement, does not contain all of the information set forth in the registration statement, some items of which are contained in exhibits to the registration statement as permitted by the rules and regulations of the SEC. For further information with respect to us and our common stock, we refer you to the registration statement, including the exhibits and the financial statements and notes filed as a part of the registration statement. Statements contained in this prospectus concerning the contents of any contract or any other document are not necessarily complete. If a contract or document has been filed as an exhibit to the registration statement, please see the copy of the contract or document that has been filed. Each statement in this prospectus relating to a contract or document filed as an exhibit is qualified in all respects by the filed exhibit. The exhibits to the registration statement should be referenced for the complete contents of these contracts and documents. A copy of the registration statement and the exhibits filed therewith may be inspected without charge at the public reference room of the SEC, located at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. You may obtain information on the operation of the public reference rooms by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet website that contains reports, proxy statements and other information about issuers, like us, that file electronically with the SEC. The address of that website is www.sec.gov.

As a result of this offering, we will become subject to the information and reporting requirements of the Exchange Act and, in accordance with this law, will file periodic reports, proxy statements and other information with the SEC. These periodic reports, proxy statements and other information will be available for inspection and copying at the SEC's public reference facilities and the website of the SEC referred to above. We also maintain a website at http://www.aduro.com. After the closing of this offering, you may access our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website is not part of this prospectus.

ADURO BIOTECH, INC.
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

Years Ended December 31, 2013 and 2014

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors
Aduro Biotech, Inc.
Berkeley, California

We have audited the accompanying consolidated balance sheets of Aduro Biotech, Inc. and its subsidiary (the "Company") as of December 31, 2013 and 2014, and the related consolidated statements of operations and comprehensive loss, convertible preferred stock and stockholders' deficit, and cash flows for each of the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Aduro Biotech, Inc. and its subsidiary as of December 31, 2013 and 2014, and the results of their operations and their cash flows for each of the years then ended in conformity with accounting principles generally accepted in the United States of America.

/s/ Deloitte & Touche LLP

San Francisco, California
March 2, 2015 (April 3, 2015 as to the effects of the reverse stock split and subsequent event described in Note 17)

ADURO BIOTECH, INC.
Consolidated Balance Sheets
(In thousands, except share and per share amounts)

	December 31,		Pro Forma at December 31, 2014
	2013	2014	(unaudited)
Assets			
Current assets:			
Cash and cash equivalents	$ 8,532	$ 119,456	$ 119,456
Accounts receivable	357	3,153	3,153
Prepaid expenses and other current assets	467	2,612	2,612
Total current assets	9,356	125,221	125,221
Property and equipment, net	399	1,053	1,053
Other assets	125	188	188
Total assets	$ 9,880	$ 126,462	$ 126,462
Liabilities, Convertible Preferred Stock and Stockholders' (Deficit) Equity			
Current liabilities:			
Accounts payable	$ 763	$ 5,030	$ 5,030
Accrued clinical trial and manufacturing expenses	890	3,350	3,350
Accrued expenses and other liabilities	1,138	2,408	2,408
Deferred revenue	57	33,427	33,427
Note payable to related party	200	—	—
Convertible promissory notes payable to related parties, net	11,383	—	—
Total current liabilities	14,431	44,215	44,215
Deferred revenue	—	2,592	2,592
Convertible promissory note payable to related party, net	1,406	—	—
Convertible preferred stock warrant liability	72	100	—
Common stock warrant liability	505	889	889
Total liabilities	16,414	47,796	47,696
Commitments and contingencies (Note 9)			
Convertible preferred stock; $0.0001 par value, 25,555,508 and 69,716,345 shares authorized at December 31, 2013 and 2014; 22,041,003 and 69,608,339 shares issued and outstanding at December 31, 2013 and 2014; no shares issued and outstanding, pro forma (unaudited); aggregate liquidation value of $145,261 at December 31, 2014	32,224	139,963	—
Stockholders' (deficit) equity:			
Common stock, $0.0001 par value; 32,000,000 and 85,000,000 shares authorized; and 295,498 and 361,997 shares issued and outstanding at December 31, 2013 and 2014, respectively; 50,479,916 shares issued and outstanding, pro forma (unaudited)	—	—	5
Additional paid-in capital	5,871	346	140,404
Accumulated deficit	(44,629)	(61,643)	(61,643)
Total stockholders' (deficit) equity	(38,758)	(61,297)	78,766
Total liabilities, convertible preferred stock and stockholders' (deficit) equity	$ 9,880	$ 126,462	$ 126,462

The accompanying notes are an integral part of these consolidated financial statements.

ADURO BIOTECH, INC.
Consolidated Statements of Operations and Comprehensive Loss
(In thousands, except share and per share amounts)

	Year Ended December 31,	
	2013	2014
Revenue:		
Collaboration and license revenue	$ —	$ 13,038
Grant revenue	828	351
Total revenue	828	13,389
Operating expenses:		
Research and development	10,687	23,513
General and administrative	4,677	8,994
Total operating expenses	15,364	32,507
Loss from operations	(14,536)	(19,118)
Interest expense	(1,371)	(2,395)
Gain on extinguishment of convertible promissory notes	—	3,553
Other (expense) income, net	(147)	946
Net loss and comprehensive loss	$ (16,054)	$ (17,014)
Net loss per common share, basic and diluted	$ (55.80)	$ (53.06)
Shares used in computing net loss per common share, basic and diluted	287,711	320,686
Pro forma net loss per common share, basic and diluted (unaudited)		$ (0.70)
Shares used in computing pro forma net loss per common share, basic and diluted (unaudited)		28,042,827

The accompanying notes are an integral part of these consolidated financial statements.

ADURO BIOTECH, INC.
Consolidated Statements of Convertible Preferred Stock and Stockholders' Deficit
(In thousands, except share amounts)

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount			
Balance at January 1, 2013	14,839,965	$ 23,693	262,827	$ —	$ 866	$ (28,575)	$ (27,709)
Issuance of Series B convertible preferred stock for cash, net of $65 of issuance costs	2,593,639	3,031	—	—	—	—	—
Issuance of Series B convertible preferred stock upon conversion of convertible promissory notes	4,607,399	5,500	—	—	—	—	—
Convertible promissory notes beneficial conversion feature (Note 5)	—	—	—	—	2,339	—	2,339
Recognition of equity component of Series B convertible promissory note (Note 5)	—	—	—	—	2,241	—	2,241
Issuance of common stock upon exercise of stock options	—	—	32,671	—	16	—	16
Stock-based compensation expense	—	—	—	—	409	—	409
Net loss	—	—	—	—	—	(16,054)	(16,054)
Balance at December 31, 2013	22,041,003	32,224	295,498	—	5,871	(44,629)	(38,758)
Issuance of Series C convertible preferred stock for cash, net of $262 of issuance costs (Note 10)	19,423,965	41,888	—	—	—	—	—
Issuance of Series C convertible preferred stock upon conversion of convertible promissory notes (Note 5)	6,199,217	13,452	—	—	—	—	—
Effects of Series C convertible preferred stock tranche (Note 10)	—	(1,475)	—	—	—	—	—
Issuance of Series B convertible preferred stock upon conversion of Series B convertible promissory notes (Note 5)	2,931,981	4,956	—	—	—	—	—
Issuance of Series D convertible preferred stock for cash, net of $2,470 of issuance costs (Note 10)	19,012,173	48,918	—	—	—	—	—
Reclassification of common stock warrants (Note 12)	—	—	—	—	784	—	784
Convertible promissory notes beneficial conversion feature	—	—	—	—	57	—	57
Reacquisition of equity component of Series B convertible promissory note	—	—	—	—	(3,432)	—	(3,432)
Reacquisition of convertible promissory notes beneficial conversion feature	—	—	—	—	(3,553)	—	(3,553)
Issuance of common stock upon exercise of stock options	—	—	66,499	—	49	—	49
Stock-based compensation expense	—	—	—	—	570	—	570
Net loss	—	—	—	—	—	(17,014)	(17,014)
Balance at December 31, 2014	69,608,339	$139,963	361,997	$ —	$ 346	$ (61,643)	$ (61,297)

The accompanying notes are an integral part of these consolidated financial statements.

ADURO BIOTECH, INC.
Consolidated Statement of Cash Flows
(In thousands)

	Year Ended December 31, 2013	2014
Cash Flows from Operating Activities		
Net loss	$(16,054)	$(17,014)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:		
Depreciation and amortization	129	240
Stock-based compensation	409	570
Loss from changes in the fair value of warrants, net	162	566
Gain from changes in the fair value of preferred stock derivative liability	—	(1,475)
Gain on extinguishment of convertible promissory notes	—	(3,553)
Non-cash interest expense related to convertible promissory notes payable	1,367	2,380
Changes in operating assets and liabilities:		
Accounts receivable	(315)	(2,796)
Prepaid expenses and other assets	(382)	(1,117)
Accounts payable	(670)	1,681
Deferred revenue	—	35,962
Accrued clinical trial and manufacturing expenses	711	2,460
Accrued expenses and other liabilities	411	1,461
Net cash (used in) provided by operating activities	(14,232)	19,365
Cash Flows from Investing Activities		
Purchase of property and equipment	(170)	(782)
Net cash used in investing activities	(170)	(782)
Cash Flows from Financing Activities		
Proceeds from issuance of convertible promissory note payable to related parties	16,192	308
Repayment of note payable to related party	—	(200)
Proceeds from issuance of convertible preferred stock, net of issuance costs	3,031	93,276
Deferred offering costs	—	(1,092)
Proceeds from exercise of stock options	16	49
Net cash provided by financing activities	19,239	92,341
Net increase in cash and cash equivalents	4,837	110,924
Cash and cash equivalents at beginning of period	3,695	8,532
Cash and cash equivalents at end of period	$ 8,532	$119,456
Supplemental Disclosure		
Cash paid for interest	$ 32	$ 18
Supplemental Disclosure of Non-Cash Investing and Financing Activities		
Issuance of Series C convertible preferred stock to a related party and other investors in connection with conversion of convertible promissory notes and accrued interest	$ —	$ 13,452
Issuance of Series B convertible preferred stock to a related party in connection with conversion of convertible promissory notes	$ 5,500	$ 4,956

The accompanying notes are an integral part of these consolidated financial statements.

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements

1. Nature of Business and Management's Plans

Nature of Business

Aduro Biotech, Inc., or the Company, is a clinical-stage immuno-oncology company located in Berkeley, California. The Company was founded in 2000 under the name Oncologic, Inc., later merged with Triton BioSystems, Inc. in 2008, and subsequently changed its name to Aduro Biotech, Inc. in 2009. The Company is focused on the development of technology platforms designed to stimulate robust and durable immune responses against cancer. The Company operates in one business segment.

The Company's more advanced technology platform is its proprietary Live, Attenuated, Double- Deleted, or LADD, method of engineering *Listeria monocytogenes* bacteria into therapeutic agents that stimulate both an immediate innate immune response and a targeted adaptive immune response to specific tumor antigens. The Company's earlier-stage technology platform is based on cyclic dinucleotides, or CDNs, novel small molecules that activate the intracellular Stimulator of Interferon Genes, or STING, receptor, a central mediator of the innate immune response. The Company's pipeline of product candidates has the potential to be applicable to a variety of cancers and to be combinable with a range of conventional and emerging cancer therapies, including cellular vaccines, chemotherapy, radiotherapy and checkpoint inhibitors, among others.

2. Summary of Significant Accounting Policies

Basis of Presentation

The consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America and include the accounts of Aduro Biotech, Inc. and its wholly owned subsidiary, Aduro GVAX, Inc. All intercompany transactions and balances have been eliminated.

Unaudited Pro Forma Stockholders' Equity

On December 16, 2014, the Company's board of directors authorized management of the Company to file a registration statement with the Securities and Exchange Commission for the Company to sell shares of its common stock to the public. The unaudited pro forma stockholders' equity at December 31, 2014 presents the Company's stockholders' equity as though all the Company's outstanding convertible preferred stock had converted into shares of common stock upon the completion of an initial public offering, or IPO, of the Company's common stock. In addition, the pro forma stockholders' equity assumes the reclassification of the convertible preferred stock warrant liability and deferred offering costs to stockholders' equity upon completion of an IPO of the Company's common stock.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities and reported amounts of expenses in the financial statements and accompanying notes. On an ongoing basis, management evaluates its estimates, including those related to revenue recognition, clinical trial accruals, convertible preferred stock and related warrants, common stock and related warrants, income taxes and stock-based compensation. Management bases its estimates on historical experience and on various other market-specific and relevant assumptions that management believes to be reasonable under the circumstances. Actual results could differ from those estimates.

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

Revenue Recognition

The Company recognizes revenues from collaboration, license or research arrangements and development grants when persuasive evidence of an arrangement exists, delivery has occurred or services have been rendered, the price is fixed or determinable and collectability is reasonably assured.

For revenue agreements with multiple-element arrangements, such as license and research and development agreements, the Company allocates revenue to each non-contingent element based on the relative selling price of each element. When applying the relative selling price method, the Company determines the selling price for each deliverable by first using vendor-specific objective evidence, if available, and then third-party evidence. If neither exists, the Company uses its best estimate of selling price for that deliverable. Revenue allocated to an element is then recognized when the four basic revenue recognition criteria are met.

Revenue associated with nonrefundable upfront license fees under arrangements where the license fees and research and development activities cannot be accounted for as separate units of accounting is deferred and recognized as revenue on a straight-line basis over the expected period of performance. Revenues from the achievement of research and development milestones, if deemed substantive, are recognized as revenue when the milestones are achieved and the milestone payments are due and collectible. If not deemed substantive, the Company recognizes such milestones as revenue on a straight-line basis over the remaining expected performance period under the arrangement. The Company will account for sales-based royalties as revenue upon achievement of certain sales milestones.

Milestones are considered substantive if all of the following conditions are met: (1) the milestone is nonrefundable; (2) achievement of the milestone was not reasonably assured at the inception of the arrangement; (3) substantive effort is involved to achieve the milestone; and (4) the amount of the milestone appears reasonable in relation to the effort expended, and the other milestones in the arrangement and the related risk associated with the achievement of the milestone and any ongoing research and development or other services are priced at fair value. Revenue related to research and development grants is recognized when the related research expenses are incurred and the Company’s specific performance obligations under the terms of the respective contracts are satisfied. Revenue recognized in the condensed consolidated statement of operations is not subject to repayment.

Deferred revenue at December 31, 2014 represents the portion of payments received for which the earnings process has not been completed. Deferred revenue expected to be recognized within the next 12 months is classified as a current liability.

The Company recognizes revenue from research and development grants when the related research expenses are incurred and the Company’s specific performance obligations under the terms of the respective contracts are satisfied. Revenue recognized in the accompanying financial statements is not subject to repayment.

Cash and Cash Equivalents

Cash and cash equivalents include all cash balances and highly liquid investments with original maturities of three months or less from the date of purchase. At December 31, 2013 and 2014, cash and cash equivalents consisted of cash in bank deposits and money market accounts held at financial institutions. The recorded carrying amount of cash equivalents approximates their fair value.

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

Deferred Offering Costs

Deferred offering costs, consisting primarily of legal, accounting and filing fees related to the IPO, are capitalized. The deferred offering costs will be offset against proceeds from the IPO upon the effectiveness of the offering. In the event the offering is terminated, all capitalized deferred offering costs will be expensed. At December 31, 2014, $1.4 million of deferred offering costs were capitalized, which were included in prepaid and other assets in the accompanying consolidated balance sheets. No amounts were deferred at December 31, 2013.

Preferred Stock Derivative Liability

In May 2014, the Company recorded a preferred stock derivative liability for a related party's right to purchase from the Company, on the same terms as the Series C Preferred Stock Purchase Agreement, additional shares of Series C preferred stock in a second and third tranche. At initial recognition, the Company recorded this derivative as a liability on the balance sheets at its estimated fair value. The derivative was subject to remeasurement at each balance sheet date, with changes in fair value recognized as a component of other income (expense), net. At the time of each tranche funding, the Company remeasured the derivative liability, with the change in fair value recognized as a component of other income (expense), net and then reclassified the remaining value associated with the preferred stock derivative liability to the Series C convertible preferred stock.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to concentration of credit risk consist of cash and cash equivalents and accounts receivable. Cash and cash equivalents are held at financial institutions in the United States. The Company is exposed to credit risk in the event of default by the financial institution to the extent that cash and cash equivalent balances recorded in the balance sheets are in excess of the amounts that are insured by the Federal Deposit Insurance Corporation, or FDIC. The Company has not experienced any losses on its deposits since inception, and management believes that minimal credit risk exists with respect to these financial institutions.

Accounts receivable consist of amounts due from a company related to a milestone payment and grant proceeds for services under an agreement with the United States government. The Company's management believes these receivables are fully collectible.

Property and Equipment

Property and equipment is carried at cost less accumulated depreciation and amortization. Depreciation and amortization of property and equipment is calculated using the straight-line method. When assets are retired or otherwise disposed of, the cost and accumulated depreciation are removed from the balance sheet and any resulting gain or loss is reflected in operations in the period realized.

The useful lives of the property and equipment are as follows:

Lab equipment	5 years
Furniture and fixtures	5 years
Computer and office equipment	3 years
Leasehold improvements	Shorter of remaining lease term or estimated useful life

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

Impairment of Long-Lived Assets

The Company reviews its long-lived assets for impairment whenever events or changes in circumstances indicate the carrying amount of an asset may not be recoverable. Recoverability of assets held and used is measured by comparison of the carrying amount of an asset to the future undiscounted cash flows expected to be generated from the use of the asset and its eventual disposition. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount exceeds the fair value of the impaired assets. Assets to be disposed of are reported at the lower of their carrying amount or fair value less cost to sell. The Company has not recorded an impairment of long-lived assets since inception.

Accrued Research and Development Costs

The Company records accrued liabilities for estimated costs of research and development activities conducted by third-party service providers, which include the conduct of preclinical studies and clinical trials and contract manufacturing activities. These costs are a significant component of the Company's research and development expenses. The Company accrues for these costs based on factors such as estimates of the work completed and in accordance with agreements established with its third-party service providers under the service agreements. The Company makes significant judgments and estimates in determining the accrued liabilities balance in each reporting period. As actual costs become known, the Company adjusts its accrued liabilities. The Company has not experienced any material differences between accrued costs and actual costs incurred. However, the status and timing of actual services performed, number of patients enrolled and the rate of patient enrollments may vary from the Company's estimates, resulting in adjustments to expense in future periods. Changes in these estimates that result in material changes to the Company's accruals could materially affect the Company's results of operations.

Convertible Preferred Stock

The Company has classified the convertible preferred stock as temporary equity in the balance sheets due to certain change in control events that are outside the Company's control, including liquidation, sale or transfer of the Company, as holders of the convertible preferred stock can cause redemption of the shares. The Company has not adjusted the carrying values of the convertible preferred stock to the liquidation preferences of such shares because it is uncertain whether or when an event would occur that would obligate the Company to pay the liquidation preferences to holders of shares of convertible preferred stock. Subsequent adjustments to the carrying values to the liquidation preferences will be made only when it becomes probable that such a redemption event will occur.

Convertible Preferred Stock and Common Stock Warrant Liability

Warrants for shares that are contingently redeemable are classified as liabilities in the balance sheets. Certain common stock warrants are subject to performance conditions which may result in the issuance of a variable number of shares. At initial recognition, the Company classified these warrants as liabilities on the balance sheets at their estimated fair value. The warrants are subject to remeasurement at each balance sheet date, with changes in fair value recognized as a component of other income (expense), net. The Company will continue to adjust the liability for changes in fair value until the earlier of the conversion to common stock warrants, performance conditions met, expiration or exercise of the warrants.

Research and Development Costs

Research and development costs are expensed as incurred. Research and development costs consist of salaries and benefits, lab supplies, contract and grant research costs, fees paid to consultants and third parties that

conduct certain research and development activities on the Company's behalf and allocations of facilities-related costs. Nonrefundable advance payments for goods or services to be rendered in the future for use in research and development activities are deferred and capitalized as prepaid expenses until the related goods are delivered or the services are performed.

Stock-Based Compensation

The Company measures its stock-based awards made to employees based on the estimated fair values of the awards as of the grant date using the Black-Scholes option-pricing model. Stock-based compensation expense is recognized over the requisite service period using the straight-line method and is based on the value of the portion of stock-based payment awards that is ultimately expected to vest. As such, the Company's stock-based compensation is reduced for the estimated forfeitures at the date of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

Stock-based compensation expense for options granted to non-employees as consideration for services received is measured on the date of performance at the fair value of the consideration received or the fair value of the equity instruments issued, using the Black-Scholes option-pricing model, whichever can be more reliably measured. Compensation expense for options granted to non-employees is remeasured each period as the underlying options vest.

Income Taxes

The Company accounts for income taxes using the asset and liability method. Under this method, deferred income tax assets and liabilities are recorded based on the estimated future tax effects of differences between the financial reporting and the tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when the differences are expected to reverse. Deferred income taxes are classified as current or non-current, based on the classifications of the related assets and liabilities giving rise to the temporary differences. A valuation allowance is provided when it is more likely than not that some portion or all of a deferred tax asset will not be realized.

The Company follows the authoritative guidance under Accounting Standards Codification Topic, or ASC 740, which clarifies the accounting for uncertainty in tax positions recognized in the financial statements. ASC 740 provides that a tax benefit from an uncertain tax position may be recognized when it is more likely that not that the position will be sustained upon examination, including resolutions of any related appeals or litigation processes, based on the technical merits.

Recent Accounting Pronouncements

In May 2014, the FASB issued ASU 2014-09 (ASC 606), *Revenue from Contracts with Customers*. This ASU affects any entity that either enters into contracts with customers to transfer goods and services or enters into contracts for the transfer of nonfinancial assets. ASU 2014-09 will replace most existing revenue recognition guidance in GAAP when it becomes effective. The standard's core principle is that a company will recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods or services. In doing so, companies will need to use more judgment and make more estimates than under the currently effective guidance. These may include identifying performance obligations in the contract, estimating the amount of variable consideration to include in the transaction price and allocating the transaction price to each separate performance obligation. ASU 2014-09 is effective for annual periods beginning after December 15, 2016, including interim periods within that period. Early adoption is not permitted. The Company is currently evaluating the impact of this guidance on its consolidated financial statements.

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

In June 2014, the FASB issued ASU 2014-10, *Development Stage Entities (Topic 915): Elimination of Certain Financial Reporting Requirements, Including an Amendment to Variable Interest Entities Guidance in Topic 810, Consolidation.* ASU 2014-10 simplifies the accounting guidance by removing all incremental financial reporting requirements for development stage entities. The amendments related to the elimination of the inception-to-date information and other disclosure requirement of Topic 915 should be applied retrospectively and are effective for annual reporting periods beginning after December 15, 2014 and interim periods therein. The Company has elected to early adopt this guidance and, accordingly, there is no inception to date information presented in these consolidated financial statements.

In August 2014, the FASB issued ASU 2014-15, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern*. ASU 2014-15 requires management to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern and to provide related footnote disclosures. In doing so, companies will have reduced diversity in the timing and content of footnote disclosures than under today's guidance. ASU 2014-15 is effective for the Company in the first quarter of 2016 with early adoption permitted. The Company does not believe the impact of adopting ASU 2014-15 on its consolidated financial statements will be material.

3. Fair Value Measurements

The carrying amounts of certain of the Company's financial instruments, including cash equivalents, accounts receivable, accounts payable and convertible promissory notes payable approximated their fair values due to their short maturities. Assets and liabilities recorded at fair value on a recurring basis in the balance sheets, as well as assets and liabilities measured at fair value on a non-recurring basis or disclosed at fair value, are categorized based upon the level of judgment associated with inputs used to measure their fair values. The accounting guidance for fair value provides a framework for measuring fair value, and requires certain disclosures about how fair value is determined. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (an exit price) in an orderly transaction between market participants at the reporting date. The accounting guidance also establishes a three-level valuation hierarchy that prioritizes the inputs to valuation techniques used to measure fair value based upon whether such inputs are observable or unobservable. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect market assumptions made by the reporting entity. The three-level hierarchy for the inputs to valuation techniques is briefly summarized as follows:

Level 1—Inputs are unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date;

Level 2—Inputs are observable, unadjusted quoted prices in active markets for similar assets or liabilities, unadjusted quoted prices for identical or similar assets or liabilities in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the related assets or liabilities; and

Level 3—Unobservable inputs that are significant to the measurement of the fair value of the assets or liabilities that are supported by little or no market data.

The Company's financial instruments consist of Level 1 assets and Level 3 liabilities. Where quoted prices are available in an active market, securities are classified as Level 1. Level 1 assets consist of highly liquid money market funds that are included in cash equivalents.

In certain cases where there is limited activity or less transparency around the inputs to valuation, securities are classified as Level 3. Level 3 liabilities consist of common and preferred stock warrant liabilities,

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

convertible promissory note warrant liabilities and preferred stock derivative liability. The determination of the fair value of the warrants is discussed in Note 12. Generally, increases or decreases in the fair value of the underlying convertible preferred stock or common stock would result in a directionally similar impact in the fair value measurement of the associated warrant liability.

The following table sets forth the Company's financial instruments that were measured at fair value on a recurring basis by level within the fair value hierarchy (in thousands):

	December 31, 2013			
	Level 1	Level 2	Level 3	Total
Financial Assets:				
Money market funds	$ 633	$ —	$ —	$ 633
Financial Liabilities:				
Convertible preferred stock warrant liability	$ —	$ —	$ 72	$ 72
Common stock warrant liability	—	—	505	505
Convertible promissory note warrants(1)	—	—	617	617
Total	$ —	$ —	$1,194	$ 1,194

(1) Convertible promissory note warrants are classified as part of convertible promissory notes payable.

	December 31, 2014			
	Level 1	Level 2	Level 3	Total
Financial Assets:				
Money market funds	$110,001	$ —	$ —	$110,001
Financial Liabilities:				
Convertible preferred stock warrant liability	$ —	$ —	$ 100	$ 100
Common stock warrant liability	—	—	889	889
Total	$ —	$ —	$ 989	$ 989

The following table sets forth a summary of the changes in the fair value of the Company's Level 3 financial liabilities (in thousands):

	Preferred Stock Warrant Liability	Common Stock Warrant Liability	Preferred Stock Derivative Liability	Convertible Promissory Note Warrants
Balance at December 31, 2012	$ 81	$ 334	$ —	$ —
Issuance of convertible promissory note warrants	—	—	—	617
Net increase (decrease) in fair value upon revaluation	(9)	171	—	—
Balance at December 31, 2013	72	505	—	617
Issuance of convertible promissory note warrants	—	—	—	15
Initial recognition of preferred stock derivative liability	—	—	3,018	—
Issuance of preferred stock	—	—	(1,543)	—
Net increase (decrease) in fair value upon revaluation	28	384	(1,475)	152
Reclassification to additional paid-in capital	—	—	—	(784)
Balance at December 31, 2014	$ 100	$ 889	$ —	$ —

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

4. Balance Sheet Components

Property and Equipment, Net

Property and equipment, net consisted of the following (in thousands):

	December 31,	
	2013	2014
Lab equipment	$ 569	$ 1,165
Computer and office equipment	439	520
Furniture and fixtures	24	87
Leasehold improvements	150	304
Total property and equipment	1,182	2,076
Less: accumulated depreciation and amortization	(783)	(1,023)
Property and equipment, net	$ 399	$ 1,053

Depreciation and amortization expense for the years ended December 31, 2013 and 2014 was $129,000 and $240,000, respectively.

Accrued Expenses and Other Liabilities

Accrued expenses and other liabilities consisted of the following (in thousands):

	December 31,	
	2013	2014
Compensation and related benefits	$ 786	$1,276
Professional and consulting services	135	961
Interest payable	190	—
Other	27	171
Total accrued expenses and other liabilities	$1,138	$2,408

5. Related Party Convertible Promissory Notes

Convertible Promissory Notes Payable to Related Parties, Short-Term

In August 2013, the Company entered into a note and warrant purchase agreement with related parties to raise up to $13.0 million via the issuance of convertible promissory notes, or the Notes, and warrants to purchase common stock. The Notes bear interest at 5% per annum and automatically convert into equity shares upon the earlier of the closing of a convertible preferred stock financing with proceeds of at least $35.0 million, or Next Financing Event, or the merger or sale of the Company, or Sale Event, or the maturity of the notes on May 30, 2014. If the Notes are converted due to a Next Financing Event, the conversion price shall be equal to the issue price of the equity financing, with investors receiving a variable number of shares. If the Notes are converted due to a Sale Event or their maturity, the conversion price shall be based on the Series B convertible preferred stock issue price of $1.1937322 per share, with the investors receiving a fixed number of shares, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B convertible preferred stock. The Company determined that the automatic conversion feature upon occurrence of the Next Financing Event represented a redemption feature embedded within the

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

Notes. The Company also determined that the provisions whereby the Notes automatically convert upon a Sale Event or on the original maturity date of the Notes of May 30, 2014 were considered to be conversion options within the Notes.

During 2013, the Company issued $12.7 million in Notes and in January 2014 issued an additional $0.3 million in Notes. At the time the Notes were issued, the Company determined that a beneficial conversion feature existed as the fair value of the securities into which the Notes were convertible was greater than the effective conversion price on the borrowing date. Accordingly, the Company recorded a beneficial conversion feature of $2.3 million and $0.1 million during 2013 and 2014, respectively. The beneficial conversion feature was recorded as an increase to additional paid-in capital with the offset recorded as a discount on the Notes.

Each Note was also issued with warrants to purchase common stock with the number of warrants being equal to 10% of the outstanding principal balance of the Notes (or $1.3 million) divided by the issuance price per share of the shares into which the Notes convert. The warrants can be exercised at any time into a variable number of shares of common stock at an exercise price of $0.02 per share for a period of 10 years from the date of issuance. See Note 12. In May 2014, a total of 431,316 warrant shares were issued when the Notes and accrued interest were converted into Series C convertible preferred stock. At the time the warrants were issued, the Company recognized the fair value of the warrants of $0.6 million as a discount on the related Notes. Prior to the Series C convertible preferred stock financing in May of 2014, such warrants were determined to be embedded derivatives and classified together with the Notes on the consolidated balance sheet.

The discounts associated with both the beneficial conversion feature and warrants were amortized to interest expense using the effective interest method through May 30, 2014, the contractual maturity date of the Notes. During the years ended December 31, 2013 and 2014, the Company recognized interest expense of $1.0 million and $2.0 million, respectively.

At the time of the Series C convertible preferred stock offering in May 2014, the Notes were redeemed under the Next Financing Event redemption feature whereby the aggregate of the outstanding principal and accrued interest balance of the Notes of $13.4 million was converted into 6,199,217 shares of Series C convertible preferred stock based on the Series C convertible preferred stock fair value. The redemption of the Notes was accounted for as a debt extinguishment. Additionally, the Notes contained a beneficial conversion feature which was reacquired and a portion of the reacquisition price allocated to the beneficial conversion feature. The amount allocated to reacquire the beneficial conversion feature was measured using the intrinsic value of the conversion option at the extinguishment date and reflected as a reduction to equity of $3.6 million. As a result, the amount allocated to reacquire the Notes was less than the carrying value of the Notes which resulted in a gain on extinguishment of $3.6 million.

Additionally, on the date of the Series C convertible preferred stock offering in May 2014, the warrants issued together with the Notes were no longer classified as embedded derivatives and accordingly the fair value of such warrants was reclassified to equity in the amount of $0.8 million.

Convertible Promissory Notes Payable to Related Party, Long-Term

As part of the Series B convertible preferred stock financing, the Company entered into various unsecured convertible promissory notes and warrants with an investor. The notes are noninterest-bearing, convertible into Series B preferred stock at a price of $1.1937322 per share upon the closing of a convertible preferred stock financing with proceeds of at least $2.0 million and mature on April 15, 2021. Convertible promissory notes in the amounts of $2.5 million, $3.0 million and $3.5 million were issued in October

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

2011, August 2012 and January 2013, respectively. In January 2013, the $2.5 million and $3.0 million notes were converted into 4,607,399 shares of Series B convertible preferred stock. In May and November 2014 $1.6 million and $1.9 million of the convertible promissory notes, respectively, were converted into 1,373,843 and 1,558,138 shares of Series B convertible preferred stock, respectively. See Note 10.

As part of the Series B preferred stock financing, the Company also issued warrants to the investor as follows: (a) in April 2011, warrants to purchase 61,410 shares of Series B convertible preferred stock and 60,315 shares of common stock; (b) in June 2011, warrants to purchase 241,260 shares of common stock; and (c) in October 2011, warrants to purchase 150,787 shares of common stock. See Note 12 for information regarding the terms of the warrants.

The notes issued in January 2013 were determined to contain a feature allowing for cash settlement. In accordance with the applicable accounting standards for certain convertible debt instruments that may be settled in cash or other assets, or partially in cash, upon conversion, the Company recorded the long-term debt and equity components of the convertible promissory note separately. At initial recognition, the Company allocated $1.3 million and $2.2 million to the debt and equity components, respectively. The Company recorded the equity component as a discount on the related debt. The discount, which represents non-cash interest expense, is being amortized to interest expense through maturity date of April 15, 2021 using the effective interest method. The Company recognized $0.1 million in interest expense for each of the years ended December 31, 2013 and 2014. In May 2014 and November 2014, the Company converted $1.6 million and $1.9 million, respectively, of the $3.5 million Series B convertible promissory notes prior to their maturity date. Upon conversion, the Company reacquired the equity component of the related convertible promissory notes, recording a reduction to additional paid in capital of $3.4 million, the elimination of the related unamortized debt discount of $2.0 million and the issuance of Series B preferred stock of $5.0 million.

The outstanding carrying balance of the long-term convertible promissory note payable to related party, net of the unamortized debt discount was $1.4 million at December 31, 2013. There was no balance outstanding at December 31, 2014.

6. Note Payable to Related Party

In December 2008, the Company issued an unsecured note payable to an existing minority stockholder for $200,000. The note bears interest at the U.S. Federal Reserve prime rate, or prime, per annum, compounded quarterly, and beginning in 2014, the interest rate increases to prime plus 4%, compounded quarterly. Accrued interest from the date of issuance of the note until December 31, 2013 in the amount of $32,000 was paid in 2013, according to the terms of the note agreement. The outstanding principal balance of $200,000 along with $15,000 of accrued interest was paid in December 2014.

7. Collaboration Agreements

Janssen ADU-741 and GVAX Prostate Agreements

In May 2014, the Company entered into a Research and License Agreement, or Janssen ADU-741 Agreement, and a GVAX Prostate License Agreement, or Janssen GVAX Prostate Agreement, with Janssen Biotech, Inc., or Janssen, a wholly-owned subsidiary of Johnson & Johnson Development Corporation, to collaborate in the development of a drug for the treatment of prostate cancer. Under the terms of the Janssen ADU-741 Agreement, the Company granted Janssen exclusive, worldwide license under intellectual property rights controlled by the Company to research, develop, manufacture, use, sell and otherwise exploit products containing ADU-741 for any and all uses. The Company is responsible for certain research and development

activities from the effective date of the agreement until approval of an investigational new drug, or IND. During 2014, the Company received an upfront payment of $12.0 million and non-substantive milestone payments of $3.5 million upon completion of certain development activities. In December 2014, the Company completed a substantive milestone resulting in recognition of collaboration and license revenue of $3.0 million. The Company received the $3.0 million payment in January 2015. Under the terms of the Janssen ADU-741 Agreement, the Company may receive future nonrefundable milestone payments up to a total of $1.0 million after completion of various stages of the research and development activities, and the Company is eligible to receive future contingent payments up to a total of $345.5 million comprised of development milestones through completion of all Phase 3 clinical trials, as well as launch, commercialization and sales milestones. The contingent payments are triggered upon the activities expected to be undertaken by Janssen. The Company is eligible to receive royalties on net sales of licensed products by Janssen, its affiliates and sublicensees at a rate ranging from the mid-single digits to low teens based on the aggregate annual net sales and based on the country of sale.

Under the Janssen GVAX Prostate Agreement, the Company granted Janssen an exclusive worldwide license under intellectual property rights controlled by the Company to research, develop, manufacture, use, sell and otherwise exploit products containing GVAX Prostate for any and all uses. The Company received an upfront payment of $500,000 in June 2014 and may receive an additional $2.0 million on the achievement of a specified commercial milestone. In addition, the Company is eligible to receive royalties in the high single digits based on net sales of the product.

The development activities being conducted by the Company are based on a combination of the technology licensed under both agreements. Accordingly, the Company has accounted the Janssen ADU-741 Agreement and Janssen GVAX Prostate Agreement as one arrangement and has identified the deliverables within the arrangement as a license to the technology and research and development activities through IND regulatory approval. The Company has determined that the licenses and development services under the license and research agreements represent a single unit of accounting. The licenses do not have stand-alone value to Janssen, separable from the development services to be performed under the agreement, as Janssen is unable to use the licenses for their intended purpose without the Company's performance of the research and development services. As a result, the Company recognizes revenue from the upfront payments ratably over the term of its estimated period of performance under the agreement. Changes in the estimated period of performance will be accounted for prospectively as a change in estimate. The upfront fees received totaling $12.5 million are being recognized on a straight-line basis from the effective date of the agreements to September 2015, the Company's estimated performance period. The Company will recognize non-substantive milestone payments on a straight-line basis through September 2015, the Company's estimated performance period.

Janssen ADU-214 Agreement

In November 2014, a Research and License Agreement with Janssen, or Janssen ADU-214 Agreement, became effective to develop a drug for the treatment of lung cancer. Under the terms of the Janssen ADU-214 Agreement, the Company granted Janssen an exclusive, worldwide license under intellectual property rights controlled by the Company to research, develop, manufacture, use, sell and otherwise exploit products containing ADU-214 for any and all uses. The Company is responsible for certain research and development activities from the effective date of the agreement until IND regulatory approval. In November 2014, the Company received an upfront license fee of $30.0 million, which is being recognized as revenue on a straight-line basis from the effective date of the Janssen ADU-214 Agreement to February 2016, the Company's estimated performance period. Changes in the estimated period of performance will be accounted for prospectively as a change in estimate. Under the terms of the Janssen ADU-214 Agreement, the Company may receive future nonrefundable milestone payments up to a total of $11.0 million after completion of various stages of the research and development activities, and the Company is eligible to receive future contingent payments up to a total of

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

$776.0 million comprised of development milestones through completion of all Phase 3 clinical trials, as well as regulatory and commercial milestones. The contingent payments are triggered upon the activities expected to be undertaken by Janssen. The Company is eligible to receive royalties on net sales of licensed products by Janssen, its affiliates and sublicensees at a rate ranging from the high-single digits to the low teens based on the aggregate annual net sales of licensed products worldwide and based on the country of sale.

For the year ended December 31, 2014, the Company recognized revenue totaling $13.0 million related to amortization of the upfront fees and development-related substantive and non-substantive milestones. The remaining balance of the payments received of $36.0 million is included in deferred revenue at December 31, 2014.

8. Research and Development and License Agreements

Listeria-Based Agreements

JHU Listeria Agreement

In March 2011, the Company entered into a license agreement with The Johns Hopkins University, or JHU, pursuant to which the Company received an exclusive, worldwide, sublicensable license to certain patent rights covering the tumor-associated antigen mesothelin to make, use, import and commercialize products and to provide services for all bacteria-based therapeutic and/or prophylactic uses for cancer treatment and/or prevention and as a companion diagnostic. Under the agreement, or the JHU *Listeria* Agreement, the Company is obligated to use commercially reasonable efforts to develop and market licensed products and services, which can be demonstrated by achieving specified development milestones by specified dates.

Under the JHU *Listeria* Agreement, the Company is required to make future milestone payments totaling up to $375,000 upon achievement of certain regulatory milestones. Under the JHU *Listeria* Agreement, the Company is obligated to pay JHU royalties based on net sales of licensed products and services by us, our affiliates and our sublicensees at a rate in the low-single digits, subject to minimum annual royalties, and a percentage of consideration received from any sublicensing arrangements ranging from the low-single digits to the low twenties depending on the field of use and the stage of development of the product candidate at the time the sublicense is granted.

The JHU *Listeria* Agreement will continue in effect on a country-by-country basis until the expiration of the last patent within the licensed patent rights, or if no patents issue then for 20 years from the effective date of the agreement. Either party may terminate the JHU *Listeria* Agreement for the other party's uncured breach of the agreement upon 30 days' prior notice or for the other party's insolvency. Additionally, the Company may terminate the JHU *Listeria* Agreement at will upon 90 days' prior written notice to JHU.

UCB Listeria Agreement

In March 2012, the Company entered into a license agreement with the Regents of the University of California on behalf of its Berkeley campus, or UCB, granting the Company an exclusive, worldwide, sublicensable license to certain patent rights covering the use of the *Listeria monocytogenes* phage integration vector which accelerates the genetic engineering of *Listeria* to express more than one antigen to make, use, import, and commercialize products and to provide services for all fields of use. Under this agreement, or the UCB *Listeria* Agreement, the Company is obligated to use commercially reasonable efforts to develop, manufacture and sell licensed products and services and the Company is obligated to achieve specified development and regulatory milestones by specified dates.

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

Under the UCB *Listeria* Agreement, the Company is required to make future milestone payments totaling up to $350,000 upon achievement of certain development and regulatory milestones. The Company is required to pay an annual license maintenance fee until its first sale of a product covered by the licensed patent rights. Under the UCB *Listeria* Agreement, the Company is obligated to pay UCB royalties based on net sales of licensed products and services sold by the Company and its sublicensees at a rate in the low single digits, subject to minimum annual royalties and customary reductions, and a percentage of certain of the Company's sublicensing revenues in the low-single digits to low thirties depending on how the product covered by the licensed patent rights is used.

The UCB *Listeria* Agreement will last until the expiration of the last patent within the licensed patent rights. UCB may terminate the agreement for the Company's uncured material breach upon 90 days' prior written notice and the Company may terminate the agreement at will upon 90 days' prior written notice to UCB.

The Company made payments of $30,000 and $845,000 in milestone, annual maintenance fees and sublicensing fees related to this agreement during the years ended December 31, 2013 and 2014, respectively, which were recorded in research and development expense.

Cerus Corporation Agreement

On November 3, 2009, the Company entered into a license agreement with Cerus Corporation, or Cerus. Under the terms of this license agreement, Cerus granted the Company a worldwide exclusive license under certain of Cerus' patents and technology to make, have made, use, import, offer for sale and sell therapeutics for the treatment or prevention of any human or animal diseases involving a vaccine or immunotherapy.

The Company is required to pay Cerus royalties based on a percentage of net sales in the low single digits, including net sales by sublicensees, of products incorporating the licensed technology and from the provision of any services based upon the licensed technology. If the products or services are bundled with any other products or services, the portion of the net sales allocated to the licensed technology would be used in determining the royalty payments.

GVAX-Based Agreements

ANI Agreement

In January 2013, the Company entered into an asset purchase agreement with BioSante Pharmaceuticals, Inc., which subsequently merged with and into ANI Pharmaceuticals, Inc., or ANI, in June 2013. Under the agreement, or the ANI Agreement, the Company purchased all the rights, title and interest of ANI in and to all of the assets related to or comprising GVAX product candidates and any assets necessary or reasonably useful to make, have made, use, have used, sell, offer for sale, have sold, import, have imported, develop, have developed, commercialize and have commercialized GVAX products.

Under the ANI Agreement, the Company paid ANI cash consideration of $1.0 million and will be required to make royalty payments on net sales of GVAX products sold by the Company, its affiliates and its sublicensees for the treatment of certain cancers, which are covered by purchased intellectual property rights or developed using purchased technology, at rates in the low single digits. The Company is also required to pay milestone payments up to $4.0 million for GVAX pancreas or prostate products in combination with *Listeria* or up to $12.0 million per product for other GVAX products upon the achievement of certain sales milestones. The Company is obligated to make royalty payments on a product-by-product and country-by-country basis until the later of (i) the expiration of the last to expire of the purchased patent rights covering the GVAX product or the

regulatory exclusivity period and (ii) up to seven years from the first commercial sale of the product in such country depending on the level of net sales in such country after the expiration of the patent or regulatory exclusivity period. The royalties and milestone payments for GVAX products for the treatment of pancreas and prostate cancer, as well as the royalties and milestone payments for other cancer products, are each capped at specified maximum amounts. To the extent the Company enters into a sublicensing agreement relating to the GVAX pancreas or prostate cancer products in combination with *Listeria*, the Company is required to pay ANI a percentage of the Company's sublicensing income, ranging from the low teens to the low thirties based on the indication, the stage of development of the GVAX products at the time the sublicense is granted and the amount of development costs expended by the Company at the time the sublicense is granted. The sublicensing payments owed under this ANI Agreement for pancreas and prostate cancer products in combination with *Listeria* are each capped at specified maximum amounts.

In 2013, the Company recorded the $1.0 million payment for the purchase of the assets as research and development expense because the Company determined that there was no alternative future use. During 2014, the Company made a payment of $0.1 million for sublicensing fees, which was recorded in research and development expense.

JHU GVAX Agreement

In January 2013, the Company entered into a license agreement with JHU granting the Company an exclusive, worldwide, sublicensable license under certain GVAX-related patent rights and cell lines, and a non- exclusive, worldwide, sublicensable license to related know-how, in each case to make, have made, use, have used, sell, offer for sale, have sold, import, have imported, develop and commercialize products and services using or incorporating licensed patent rights, cell lines, or know-how for any use. Under the agreement, or the New License Agreement, the Company is obligated to use commercially reasonable efforts to develop and market licensed products and services, including using commercially reasonable efforts to achieve specified development milestones by specified dates.

Under the New License Agreement, the Company paid licensing fees of $125,000 in 2013 and 2014, which were recorded in research and development expenses. Under the New License Agreement, the Company is also required to pay JHU development and regulatory milestone payments totaling up to approximately $1.1 million for STINGVAX, a GVAX product with CDNs, approximately $1.2 million for TEGVAX, a GVAX product with TLRs, and approximately $1.2 million for other licensed products. The Company is also required to pay JHU royalties based on net sales of licensed products and services by the Company, its affiliates and its sublicensees at a rate in the low single digits, subject to minimum annual royalties and standard reductions upon expiration of patent coverage and for licenses to third-party intellectual property rights, as well as a percentage of certain consideration received in consideration of the grant of sublicenses under this agreement ranging from the low tens to the mid-twenties depending on the stage of development of the product candidate at the time the sublicense is granted and the number of sublicenses granted.

The New License Agreement will continue in effect on a product-by-product basis and service-by- service basis until 30 years after the first commercial sale of such product or service, provided that the term may be extended for additional ten-year periods upon mutual agreement of the parties. Either party may terminate the New License Agreement for the other party's uncured material breach of the agreement upon 60 days' prior notice to the breaching party, or 30 days' notice if such breach relates to a payment obligation, or for the other party's insolvency. Additionally, the Company may terminate the New License Agreement at will upon 90 days' prior written notice to JHU.

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

CDN-Based Agreements

Karagen Agreement

In June 2012, the Company entered into a license agreement with Karagen Pharmaceuticals, Inc., or Karagen, pursuant to which Karagen granted the Company an exclusive, worldwide, sublicenseable license under certain patents and know-how related to CDNs to make, develop, use and commercialize products for use in the therapeutic and/or prophylactic treatment of cancer or precancerous conditions and a non-exclusive license to such patents and know-how to make, develop, use, and commercialize products in all other fields of use. Under the agreement, or the Karagen Agreement, the Company was also granted an option to designate a particular disease or condition to be added to the field of use under its exclusive license. Under the Karagen Agreement, the Company is obligated to use commercially reasonable efforts to develop and commercialize licensed products in the United States and the European Union.

Under the Karagen Agreement, the Company is required to make milestone payments totaling up to $900,000, in the aggregate, upon its achievement of specified development and regulatory milestones as well as royalty payments based on net sales of products by the Company and by its affiliates and sublicensees at rates ranging in the low single-digit percentages, determined by whether the disease field is an exclusive or non-exclusive disease field, subject to minimum annual royalties and standard reductions. In addition, the Company is required to pay Karagen a percentage of consideration received from any sublicensing arrangements ranging from the mid-single digits to the mid-teen digits, determined by the current stage of development of the relevant licensed product at the time of the sublicense grant, or by whether the Company has exercised its option to add a designated field of use to its exclusive license, as applicable.

The Karagen Agreement will expire, on a country-by-country basis, upon the expiration of the last-to- expire valid claim within the licensed patent rights. Either party may terminate the Karagen Agreement upon 90 days' advance written notice in the event of the other party's material breach that is not cured within such 90-day period, and immediately upon notice in the event of the other party's bankruptcy or insolvency. Additionally, the Company may terminate the Karagen Agreement at will upon 90 days' advance written notice to Karagen.

UCB Vance Agreement

In September 2014, the Company entered into a license agreement with UCB, granting the Company an exclusive, worldwide, sublicenseable license under certain patent rights covering the use of the CDN molecules that activate the STING receptor to make, develop, use and commercialize products, to practice methods and to offer services, in each case that are covered by the licensed patent rights, in all fields of use. Under this agreement, or the UCB Vance Agreement, the Company is obligated to use commercially reasonable efforts to develop, manufacture and sell licensed products and services and are obligated to achieve specified development and regulatory milestones by specified dates.

Under the UCB Vance Agreement, the Company paid UCB an upfront fee of $50,000 in 2014, which was recorded in research and development expenses, and is required to make future milestone payments totaling up to $1.8 million upon achievement of certain development and regulatory milestones. Under the UCB Vance Agreement, the Company is also obligated to pay UCB royalties based on net sales of licensed products by the Company and our sublicensees at a rate in the low single-digit percentages, subject to minimum annual royalties and a percentage of certain of the Company's sublicensing revenues ranging from the low-single digits to the low thirties, determined by the current stage of development of the relevant licensed product at the time the sublicense is granted.

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

The UCB Vance Agreement will continue in effect until the expiration of the last-to-expire valid claim within the licensed patent rights. UCB may terminate the agreement upon 90 days' advance written notice in the event of the Company's material breach that is not cured within such 90 day period. The Company may terminate the agreement at will upon 90 days' advance written notice.

Memorial Sloan Kettering Cancer Center Agreement

In December 2014, the Company entered into a license agreement with Memorial Sloan Kettering Cancer Center, or MSK, The Rockefeller University, Rutgers, The University of New Jersey, and University of Bonn, collectively the Licensors, granting the Company an exclusive, worldwide, sublicensable license to certain patent rights related to CDNs and a non-exclusive, worldwide, sublicensable license under specified know-how, in each case to develop, make, have made, use, have used, import, sell, and otherwise commercialize licensed products for use in therapeutic and/or prophylactic treatments in humans. Under this agreement, or the MSK Agreement, the Company is obligated to use commercially reasonable efforts to develop and commercialize a licensed product, including achieving specified development and regulatory milestones by specified dates.

Under the MSK Agreement, the Company paid MSK an up-front fee of $50,000 in January 2015, which was recorded in research and development expenses in 2014, and is required to make future milestone payments totaling up to $3.3 million upon achievement of certain development, regulatory and commercialization milestones. Under the MSK Agreement, the Company is also obligated to pay MSK royalties based on net sales of licensed products by the Company and our sublicensees at a rate in the low single digits, subject to minimum annual royalties and a percentage of certain of the Company's sublicensing revenues ranging from ten to mid-twenties.

The MSK Agreement will continue in effect until the expiration of our royalty obligations. The Company or the Licensors may terminate the agreement for uncured material breach upon 90 days' prior written notice and the Company may terminate the agreement at will upon 30 days' prior written notice to the Licensors.

9. Commitments and Contingencies

Leases

The Company leases their office and research and development facility in Berkeley, California, under a non-cancelable operating lease which expires in August 2016. In April 2014, the Company amended its office lease agreement to increase the square footage by 3,990 square feet of rentable space resulting in an $8,000 increase in the monthly rent payment effected on June 1, 2014.

Rent expense was $281,000 and $344,000 for the years ended December 31, 2013 and 2014, respectively. Under the terms of the lease agreement, the Company is also responsible for certain insurance, property tax and maintenance expenses. Future minimum payments under the lease at December 31, 2014 are as follows (in thousands):

Year ending December 31,	Amounts
2015	$ 392
2016	261
Total	$ 653

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

Indemnifications

In the ordinary course of business, the Company enters into agreements that may include indemnification provisions. Pursuant to such agreements, the Company may indemnify, hold harmless and defend an indemnified parties for losses suffered or incurred by the indemnified party. Some of the provisions will limit losses to those arising from third party actions. In some cases, the indemnification will continue after the termination of the agreement. The maximum potential amount of future payments the Company could be required to make under these provisions is not determinable. The Company has never incurred material costs to defend lawsuits or settle claims related to these indemnification provisions. The Company has also entered into indemnification agreements with its directors and officers that may require the Company to indemnify its directors and officers against liabilities that may arise by reason of their status or service as directors or officers to the fullest extent permitted by Delaware corporate law. The Company currently has directors' and officers' insurance.

Legal

During the normal course of business, the Company may be a party to legal claims that may not be covered by insurance. Management does not believe that any such claims would have a material impact on the Company's financial statements.

Other Commitments

The Company has various manufacturing, clinical, research and other contracts with vendors in the conduct of the normal course of its business. All contracts are terminable, with varying provisions regarding termination. If a contract with a specific vendor were to be terminated, the Company would only be obligated for the products or services that the Company had received at the time the termination became effective as well as non-cancelable and non-refundable payment obligations incurred by the vendor for products or services before the termination became effective. In the case of terminating a clinical trial agreement at a particular site, the Company would also be obligated to provide continued support for appropriate medical procedures at that site until completion or termination.

10. Convertible Preferred Stock

In January 2013, the Company issued 2,593,639 shares of Series B convertible preferred stock to related parties for net cash proceeds of $3.0 million and 4,607,399 shares as settlement of outstanding convertible promissory notes issued in October 2011 and August 2012, in the amount of $5.5 million. In May and November 2014, the Company issued 1,373,843 and 1,558,138 shares, respectively, of Series B convertible preferred stock to the related party as settlement of a convertible promissory note issued in January 2013. See Note 5.

On May 30, 2014, the Company entered into the Series C Preferred Stock Purchase Agreement with existing as well as new investors for the issuance of up to 31,544,844 shares of Series C convertible preferred stock at a purchase price of $2.17 per share. Upon the execution of the agreement, the Company issued 17,119,818 shares of Series C convertible preferred stock for net cash proceeds of $36.9 million and 6,199,217 shares as settlement of outstanding convertible promissory notes, including accrued interest, in the amount of $13.4 million. On December 15, 2014, the Company issued 2,304,148 additional shares of Series C convertible preferred stock to the related party for cash proceeds of $5.0 million.

In May 2014, the Company recorded a preferred stock derivative liability in the amount of $3.0 million, as a related party received the right to purchase from the Company, on the same terms, additional shares of Series

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

C convertible preferred stock, in a second and third tranche. As the related party holds a majority of the board seats, the decision to complete these tranches was deemed to be outside the control of the Company. During the year ended December 31, 2014, the Company recognized a $1.5 million gain related to changes in fair value of the preferred stock derivative liability. At the time of the second and third tranche funding, the Company remeasured the preferred stock derivative liability, with the change in fair value recognized as a component of other income (expense), net. At the date of derecognition of the preferred stock derivative liability, the Company reclassified the remaining value associated with the liability of $1.5 million to Series C convertible preferred stock.

The key assumptions used in the valuation of the preferred stock derivative liability were as follows:

	Year Ended December 31, 2014
Expected term (in years)	0 – 0.55
Fair value of underlying shares	$2.17 – $2.46
Volatility	80.0%
Risk-free interest rate	0.02% –0.07%
Dividend yield	— %

On December 19, 2014, the Company entered into the Series D Preferred Stock Purchase Agreement with existing as well as new investors for the issuance of up to 19,012,173 shares of Series D convertible preferred stock at a purchase price of $2.70 per share. Upon the execution of the agreement, the Company issued 19,012,173 shares of Series D convertible preferred stock for net cash proceeds of $48.9 million.

At December 31, 2013, convertible preferred stock consisted of the following (in thousands, except share data):

	Shares Authorized	Shares Outstanding	Net Carrying Value	Liquidation Preference
Series A	161,844	161,844	$ 8,092	$ 8,092
Series A-1	3,396,666	3,369,431	4,582	4,582
Series B	22,000,000	18,509,728	19,550	22,096
Total	25,555,508	22,041,003	$32,224	$ 34,770

At December 31, 2014, convertible preferred stock consisted of the following (in thousands, except share data):

	Shares Authorized	Shares Outstanding	Net Carrying Value	Liquidation Preference
Series A	161,843	161,843	$ 8,092	$ 8,092
Series A-1	3,393,666	3,369,431	4,582	4,582
Series B	21,525,480	21,441,709	24,505	25,596
Series C	25,623,183	25,623,183	53,866	55,603
Series D	19,012,173	19,012,173	48,918	51,388
Total	69,716,345	69,608,339	$ 139,963	$ 145,261

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

Significant provisions of the convertible preferred stock are as follows:

Dividends—The holders of preferred stock are entitled to receive, on a pari passu basis, non-cumulative dividends, as adjusted for stock splits, dividends, reclassifications or the like, prior and in preference to any declaration or payment of any dividends to the holders of common stock, when and if declared by the Board of Directors, at a rate of 8% of the original issuance price per share for Series B, Series C, and Series D, or collectively, Senior Preferred, and 5% for Series A-1 and Series A, or collectively, Junior Preferred, per annum. No dividends have been declared by the Board of Directors or paid since inception.

Conversion—At the option of the holder, each share of preferred stock is convertible into fully paid and nonassessable shares of common stock on a 0.72-for-1 basis, subject to stock splits, stock dividends and dilution. Each share of preferred stock automatically converts into the number of shares of common stock into which such shares are convertible at the then applicable conversion ratio upon (i) the closing of the sale of shares of common stock in a public offering resulting in at least $45.0 million of gross proceeds, or (ii) the consent of the majority of the holders of the then outstanding shares of Series B and Series C and at least 60% of the then outstanding shares of Series D, voting together as a single class on an as-converted basis.

Liquidation—In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Company, holders of Senior Preferred are entitled to receive, prior and in preference to holders of Junior Preferred and common stock, an amount equal to their original issue price plus any declared and unpaid dividends. If upon occurrence of such an event, the assets and funds to be distributed among the holders of Senior Preferred are insufficient to permit the payment to such holders, the entire assets and funds of the Company legally available for distribution will be distributed ratably among the holders of Senior Preferred. Upon completion of the distribution to the holders of Senior Preferred, holders of Junior Preferred are entitled to receive prior and in preference to holders of common stock, an amount equal to their original issue price plus any declared but unpaid dividends. If upon occurrence of such an event, after payment in full of preferential amounts due to holders of Senior Preferred, the assets and funds to be distributed among the holders of Junior Preferred are insufficient to permit the payment to such holders, the entire remaining assets and funds of the Company legally available for distribution will be distributed ratably among the holders of Junior Preferred. All remaining legally available assets of the Company are to be distributed pro rata to the holders of Senior Preferred and common stock, on an as-converted basis. A liquidation may be deemed to be occasioned by or to include (unless waived by the written election of the majority of the outstanding shares of Series B and majority of Series C and Series D holders at least 10 days prior to the effective date of such event) (i) a consolidation or merger of the Company with or into any other corporation in which the Company's stockholders of record as constituted immediately prior to such transaction will, immediately after such transaction, fail to hold at least 50% of the voting power of the result of the surviving corporation; or (ii) a sale, conveyance or disposition of all or substantially all of the assets of the Company.

Voting—Each holder of preferred stock is entitled to the number of votes equal to the number of shares of common stock into which each such shares of preferred stock could be converted on the record date for the vote or consent of the stockholders, except as otherwise required by law or other provisions of the Company's Certificate of Incorporation, and have voting rights and powers equal to the voting rights and powers of the common stockholders. The holders of Series B, voting as a separate class, are entitled to elect two member of the Board of Directors. The holders of Series C, voting as a separate class, are entitled to elect two members of the Board of Directors. The holders of preferred stock and common stock, voting as a single class on an as-converted basis, are entitled to elect three members of the Board of Directors.

Protective Provisions—The holders of Series D have certain protective provisions. As long as any shares of Series D are outstanding, the Company cannot, without the approval of the majority of the then

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

outstanding shares of Series D, voting as a separate class, take any actions that: (i) amends, alters or repeals any powers, preferences or rights of Series D preferred stock; (ii) increase or decrease the authorized number of shares of Series D; (iii) redeem, repurchase or make acquisitions of the Series C, Series B, Junior Preferred or common stock; or (iv) declare or pay any dividends or distributions on the Series C, Series B, Junior Preferred or common stock.

The holders of Series C and Series B have certain protective provisions. As long as any shares of Series C and Series B are outstanding, the Company cannot, without the approval of 60% of the then outstanding shares of Series C and a majority of the then outstanding shares of Series B, each voting as a separate class, take any actions that: (i) consummates a liquidation, dissolution or winding up of the Company; (ii) amends, alters or repeals any powers, preferences or rights of Series C or Series B preferred stock; (iii) results in issuance of any additional class or series of capital stock, unless the class ranks junior to Series C or Series B preferred stock with respect to liquidation preferences; (iv) increases or decreases the authorized number of members of the Board of Directors; (v) declare or pay any dividends or distributions on the preferred and common stock; or (vi) redeem, repurchase or make acquisitions of any securities of the Company.

The holders of Junior Preferred have certain protective provisions. As long as any shares of Junior Preferred are outstanding, the Company cannot, without the approval of the majority of the then outstanding shares of Junior Preferred, voting as a separate class, take any action that: (i) amends, alters or repeals any powers, preferences or rights of Junior Preferred; or (ii) increase the number of authorized shares of Junior Preferred.

11. Common Stock

The Company had reserved shares of common stock, on an as-converted basis, for future issuance as follows:

	December 31,	
	2013	2014
Convertible preferred stock outstanding	15,869,471	50,117,919
Options issued and outstanding	4,029,331	5,970,382
Shares available for future stock option grants	92,278	3,154,755
Series A-1 convertible preferred stock warrants	17,447	17,447
Series B convertible preferred stock warrants	60,308	60,308
Common stock warrants	1,154,270	1,154,270
Total	21,223,105	60,475,081

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

12. Warrants

The Company had issued and outstanding warrants that are not subject to remeasurement as follows:

	Warrants Outstanding				
	December 31, 2013	December 31, 2014	Issuance Date	Exercise Price per Share	Terms (Years)
Type of Security:					
Common	1,152	1,152	November 2008	$ 34.73	10.0
Common	720	720	January 2009	$ 34.73	10.8
Common	288	288	February 2009	$ 34.73	10.0
Common	360	360	March 2009	$ 34.73	10.0
Common	144	144	April 2009	$ 34.73	10.0
Common	66,176	66,176	July 2009	$ 1.89	10.0
Common	21,176	21,176	September 2009	$ 1.89	10.0
Common	17,280	17,280	April 2011	$ 0.70	10.0
Common	N/A	232,258(1)	August 2013	$ 0.02	10.0
Common	N/A	132,715(1)	September 2013	$ 0.02	10.0
Common	N/A	56,131(1)	December 2013	$ 0.02	10.0
Common	N/A	10,212(1)	January 2014	$ 0.02	10.0
Total	107,296	538,612			

(1) In connection with the issuance of convertible promissory notes to related parties, warrants to purchase common stock were issued in August 2013, September 2013, December 2013 and January 2014. These warrants were classified together with convertible promissory notes payable at issuance. At December 31, 2013, the number of warrants issued was subject to adjustment pending the occurrence of the next round of financing. On May 30, 2014, outstanding principal and accrued interest of the convertible promissory notes in the amount of $13.5 million was converted into Series C convertible preferred stock and issued 431,316 common stock warrants. See Note 5. At the conversion date, warrants at the then fair value were reclassified into additional paid-in capital in the amount of $0.8 million.

The Company had issued and outstanding warrants that are subject to remeasurement as follows:

	Warrants Outstanding				
	December 31, 2013	December 31, 2014	Issuance Date	Exercise Price per Share	Terms (Years)
Type of Security:					
Series A-1	10,002	10,002	April 2011	$ 1.36	10.0
Series A-1	14,233	14,233	April 2011	$ 1.23	10.0
Series B	83,771	83,771	April 2011	$ 1.19	5.0
Common	197,638	197,638	April 2011	$ 0.01	10.0
Common	241,260	241,260	June 2011	$ 0.01	9.8
Common	176,760	176,760	October 2011	$ 0.01	9.5
Common	— (2)	N/A	August 2013	$ 0.02	10.0
Common	— (2)	N/A	September 2013	$ 0.02	10.0
Common	— (2)	N/A	December 2013	$ 0.02	10.0
Total	723,664	723,664			

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

(2) In connection with the issuance of convertible promissory notes to related parties, warrants to purchase common stock were issued in August 2013, September 2013, and December 2013. At December 31, 2013, the number of warrants issued was subject to adjustment pending the occurrence of the next round of financing. On May 30, 2014, outstanding principal and accrued interest of the convertible promissory notes in the amount of $13.5 million was converted into Series C convertible preferred stock and issued 431,316 common stock warrants. See Note 5.

The following is a summary of the outstanding warrants to purchase common stock and warrants to purchase convertible preferred stock that are subject to remeasurement and their fair values at December 31, 2013 and 2014 (in thousands, except share data):

	Shares at		Fair Value at	
	December 31, 2013	December 31, 2014	December 31, 2013	December 31, 2014
Classified as warrant liability:				
Series A-1	24,235	24,235	$ 13	$ 25
Series B	83,771	83,771	59	75
Total convertible preferred stock warrants	108,006	108,006	72	100
Common	615,658	615,658	505	889
Total classified as warrant liability	723,664	723,664	$ 577	$ 989
Classified within convertible promissory notes payable:				
Common(3)	—	—	617	—
Total classified within convertible promissory notes payable	—	—	$ 617	$ —

(3) In connection with the issuance of convertible promissory notes to related parties, warrants to purchase common stock were issued in August 2013, September 2013 and December 2013. At December 31, 2013, the number of warrants issued is subject to adjustment should the Next Financing Event occur. See Note 5.

In April 2011, the Company issued warrants to purchase 24,235 shares of Series A-1 convertible preferred stock as consideration for services provided, with a weighted-average exercise price of $1.28 per share. The warrants are immediately exercisable and expire, if not exercised, in April 2021. As the shares into which the warrants are exercisable are contingently redeemable, the Company has recognized a liability for the fair value of these warrants on the consolidated balance sheets. The Company determined the fair value of the warrants to be $16,000 on the date of grant using the Black-Scholes option pricing model. The fair value of the warrants was $13,000 and $25,000 at December 31, 2013 and December 31, 2014, respectively.

In April 2011, in connection with the Series B convertible preferred stock financing, the Company issued warrants to purchase 83,771 shares of Series B convertible preferred stock, with an exercise price of $1.19 per share. The warrants are immediately exercisable and expire, if not exercised, in April 2016. As the shares into which the warrants are exercisable are contingently redeemable, the Company has recognized a liability for the fair value of these warrants on the consolidated balance sheets. The Company determined the fair value of the warrants to be $70,000 on the date of grant using the Black-Scholes option pricing model. The fair value of the warrants was $59,000 and $75,000 at December 31, 2013 and December 31, 2014, respectively.

In April, June, and October 2011, as part of the Series B convertible preferred stock financing, the Company issued warrants to purchase an aggregate of 615,658 shares of common stock, with an exercise price of

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

$0.01 per share. The warrants are exercisable beginning in April 2015 and may terminate, in whole or part, if the Company obtains certain levels of government grant funds before April 2015. The warrants expire, if not exercised, in April 2021. The Company estimated that it is more likely than not that the minimum level of grant funds will not be achieved and has recognized a liability for the fair value of these warrants on the consolidated balance sheet, as the warrants are subject to performance conditions which may result in the issuance of a variable number of shares. The Company determined the fair value of the warrants to be $393,000 on the date of grant using a Black-Scholes option pricing model. The fair value of the warrants was $0.5 million and $0.9 million at December 31, 2013 and December 31, 2014, respectively.

In August 2013, September 2013, December 2013 and January 2014, in connection with the issuance of the convertible promissory notes payable to related parties, the Company issued warrants to purchase shares of common stock equal to 10% of the outstanding principal balance of the convertible promissory notes (or $1.3 million) divided by the issuance price per share of the shares into which the convertible promissory notes convert. The warrants are immediately exercisable at $0.02 per share and expire, if not exercised, 10 years from the date of issuance. The warrants are recorded at fair value as a bifurcated embedded derivative instrument subject to remeasurement at the end of each reporting period in other income (expense), net in the consolidated statements of operations and comprehensive loss. The fair value of the derivative liability was $0.6 million at December 31, 2013 and is presented on a combined basis with the underlying convertible promissory notes on the consolidated balance sheets. In May 2014, the fair value of derivative liability of $0.8 million was reclassified to additional paid-in capital.

Convertible Preferred Stock Warrants

The key assumptions used in the Black-Scholes option-pricing model for the valuation of the convertible preferred stock warrants were as follows:

	Year Ended December 31,	
	2013	2014
Expected term (in years)	2.29 – 8.04	1.29 – 7.04
Fair value of underlying shares	$0.79 – $1.41	$0.67 – $1.98
Volatility	80.0%	53.9% – 80.8%
Risk-free interest rate	0.37% – 2.51%	0.23% – 2.30%
Dividend yield	— %	— %

Common Stock Warrants and Convertible Promissory Note Warrants

The key assumptions used in the Black-Sholes option-pricing model for the valuation of the common stock warrants were as follows:

	Year Ended December 31,	
	2013	2014
Expected term (in years)	7.29 – 9.83	6.29 – 9.79
Fair value of underlying shares	$0.82	$1.02 – $1.45
Volatility	80.0%	75.7% – 80.4%
Risk-free interest rate	1.46% – 3.04%	1.84% – 2.73%
Dividend yield	— %	— %

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

13. Stock Option Plan

In October 2009, the Company adopted the 2009 Stock Incentive Plan, or the Plan. The Plan provides for the granting of stock-based awards to employees, directors and consultants under terms and provisions established by the Board of Directors.

Under the Plan, the Board of Directors may grant incentive stock options or nonqualified stock options. Incentive stock options may only be granted to Company employees. The exercise price of incentive stock options and nonqualified stock options will be no less than 100% of the fair value per share of the Company's common stock on the date of grant. If an individual owns capital stock representing more than 10% of the voting shares, the price of each share will be at least 110% of the fair value on the date of grant. The Board of Directors determined the fair value of common stock using valuations prepared by an unrelated third-party valuation firm. Options expire after 10 years (five years for stockholders owning greater than 10% of the voting stock). The Board of Directors determines the period over which the options vest and become exercisable. Shares issued upon exercise of unvested options shall be subject to the Company's right to repurchase at their purchase price.

Stock option activity under the Company's stock option plan was as follows:

		Options Outstanding		
	Shares Available for Grant	Number of Options	Weighted-Average Exercise Price	Aggregate Intrinsic Value (In thousands)
Balance—December 31, 2012	582,610	3,105,901	$ 0.74	
Authorized	468,000	—		
Granted	(964,888)	964,888	$ 0.82	
Exercised	—	(32,671)	$ 0.48	
Canceled	6,556(1)	(8,787)	$ 17.15	
Balance—December 31, 2013	92,278	4,029,331	$ 0.72	$ 985
Authorized	5,071,079	—		
Granted	(2,019,598)	2,019,598	$ 1.00	
Exercised	—	(66,499)	$ 0.74	
Canceled	10,996(1)	(12,048)	$ 9.33	
Balance—December 31, 2014	3,154,755	5,970,382	$ 0.80	$ 4,335
Options exercisable—December 31, 2014		3,538,966	$ 0.71	$ 3,090
Options vested and expected to vest—December 31, 2014		5,753,383	$ 0.80	$ 4,220

(1) The amount excludes 2,231 and 1,052 canceled options for the years ended December 31, 2013 and 2014, respectively, initially granted from the legacy stock option plans. As these plans have been terminated, any options canceled are not added back to the existing option plan pool.

The aggregate intrinsic values of options outstanding, exercisable, vested and expected to vest were calculated as the difference between the exercise price of the options and the estimated fair value of the Company's common stock, as determined by the Board of Directors, at December 31, 2014.

The aggregate intrinsic value of options exercised under the Plan was zero and $17,000 for the years ended December 31, 2013 and December 31, 2014, respectively.

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

The total fair value of options that vested during the years ended December 31, 2013 and 2014 were $0.3 million and $0.5 million, respectively.

The weighted-average grant date fair value of employee options granted during the years ended December 31, 2013 and 2014 were $0.55 and $0.67 per share, respectively.

At December 31, 2014, the weighted-average remaining contractual life was 6.9 years and 7.8 years for exercisable options and vested and expected to vest options, respectively. The weighted-average remaining contractual life of options outstanding was 8.0 years and 7.9 years at December 31, 2013 and 2014, respectively.

Stock-based Compensation Expense

Total stock-based compensation expense recognized was as follows (in thousands):

	Year Ended December 31,	
	2013	2014
Research and development	$194	$202
General and administrative	215	368
Total stock-based compensation expense	$409	$570

At December 31, 2014, the total unrecognized compensation expense related to unvested options, net of estimated forfeitures, was $1.4 million, which the Company expects to recognize over an estimated weighted- average period of 3.2 years.

In determining the fair value of the stock-based awards, the Company uses the Black-Scholes option- pricing model and assumptions discussed below. Each of these inputs is subjective and generally requires significant judgment.

Expected Term—The Company's expected term represents the period that the Company's stock-based awards are expected to be outstanding and is determined using the simplified method (based on the mid- point between the vesting date and the end of the contractual term).

Expected Volatility—Since the Company is not yet a public company and does not have any trading history for its common stock, the expected volatility was estimated based on the average volatility for comparable publicly traded biopharmaceutical companies over a period equal to the expected term of the stock option grants. The comparable companies were chosen based on their similar size, stage in the life cycle or area of specialty.

Risk-Free Interest Rate—The risk-free interest rate is based on the U.S. Treasury zero coupon issues in effect at the time of grant for periods corresponding with the expected term of option.

Expected Dividend—The Company has never paid dividends on its common stock and has no plans to pay dividends on its common stock. Therefore, the Company used an expected dividend yield of zero.

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

The fair value of stock option awards granted to employees was estimated at the date of grant using a Black-Scholes option-pricing model with the following assumptions:

	Year Ended December 31,	
	2013	2014
Expected term (in years)	5.0 – 6.0	5.3 – 6.1
Volatility	75.7 – 78.6%	70.2 – 77.3%
Risk-free interest rate	1.36 – 1.73%	1.85 – 2.0%
Dividend yield	— %	— %

For the years ended December 31, 2013 and 2014, the Company recognized $0.4 million and $0.5 million, respectively, of stock-based compensation related to options granted to employees. The compensation expense is allocated on a departmental basis, based on the classification of the option holder. No income tax benefits have been recognized in the statements of operations for stock-based compensation arrangements and no stock-based compensation costs have been capitalized as property and equipment as of December 31, 2014.

The Company uses the fair value method to value options granted to non-employees. In 2013 and 2014, the Company recognized stock-based compensation of $50,000 and $85,000, respectively, related to options granted to non-employees.

The fair value of stock option awards granted to non-employees was estimated at the date of grant using a Black-Scholes option-pricing model with the following assumptions:

	Year Ended December 31,	
	2013	2014
Expected term (in years)	10.0	9.3 – 9.7
Volatility	78.4%	78.0 – 78.1%
Risk-free interest rate	2.72%	2.19 – 2.39%
Dividend yield	— %	— %

14. Income Taxes

For both the years ended December 31, 2013 and 2014, the Company recorded no provision for income taxes due to losses incurred.

A reconciliation of the statutory U.S. federal rate to the Company's effective tax rate is as follows:

	Year Ended December 31,	
	2013	2014
U.S. federal taxes at statutory rate	(34.0%)	(34.0%)
U.S. research credits	(1.3)	(1.0)
Warrants	3.8	2.1
Other permanent items	0.2	1.0
Change in valuation allowance	31.3	31.9
Total	— %	— %

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

The tax effects of temporary differences and carryforwards that give rise to significant portions of the deferred tax assets are as follows (in thousands):

	December 31,	
	2013	2014
Deferred tax assets:		
Net operating loss carryforwards	$ 16,823	$ 17,746
Research and development credits	1,394	870
Stock-based compensation	100	124
Accruals and reserves	291	488
Gross deferred tax assets	18,608	19,228
Valuation allowance	(18,600)	(19,212)
Total deferred tax assets	8	16
Deferred tax liabilities:		
Tangible assets	(8)	(16)
Total deferred tax liabilities	(8)	(16)
Net deferred tax assets	$ —	$ —

The Company is required to reduce its deferred tax assets by a valuation allowance if it is more likely than not that some or all of its deferred tax assets will not be realized. Management must use judgment in assessing the potential need for a valuation allowance, which requires an evaluation of both negative and positive evidence. The weight given to the potential effect of negative and positive evidence should be commensurate with the extent to which it can be objectively verified. In determining the need for and amount of the valuation allowance, if any, the Company assesses the likelihood that it will be able to recover its deferred tax assets using historical levels of income, estimates of future income and tax planning strategies. As a result of historical cumulative losses, the Company determined that, based on all available evidence, there was substantial uncertainty as to whether it will recover recorded net deferred taxes in future periods. Accordingly, the Company recorded a valuation allowance against all of its net deferred tax assets at December 31, 2013 and 2014. The net valuation allowance increased by $5.7 million and $0.6 million in 2013 and 2014, respectively.

At December 31, 2014, the Company generated net operating loss, or NOL, carryforwards (before tax effects) for federal and state income tax purposes of $51.2 million and $6.0 million, respectively. These federal and state NOL carryforwards will begin to expire in 2027 and 2017, respectively, if not utilized. In addition, the Company generated federal and state research and development tax credit carryforwards of $0.3 million and $0.9 million, respectively, to offset future income tax liabilities. The federal research and development tax credits can be carried forward for 20 years and will start to expire in 2034, if not utilized, while the state research and development tax credit can be carried forward indefinitely.

Under Section 382 of the Internal Revenue Code of 1986, as amended, or the Code, the Company’s ability to utilize NOL carryforwards or other tax attributes, such as research tax credits, in any taxable year may be limited if the Company has experienced an “ownership change.” Generally, a Section 382 ownership change occurs if one or more stockholders or groups of stockholders who owns at least 5% of a corporation’s stock increases its ownership by more than 50 percentage points over its lowest ownership percentage within a specified testing period. Similar rules may apply under state tax laws. The Company performed a Section 382 analysis and believes that it experienced multiple ownership changes under Section 382 of the Code. As a result of the ownership changes, the Company estimates that the utilization of $42.4 million and $5.0 million of federal and state NOLs, respectively, is subject to annual limitations under Section 382. Future changes in the

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

Company's stock ownership, some of which are outside of the Company's control, could result in additional ownership changes under Section 382 of the Code and result in additional limitations. All of the Company's federal tax credits generated prior to 2014 will expire unutilized subject to limitation while the state credit carryforwards will not expire as they are carried forward indefinitely. The Company has recorded a full valuation allowance related to its NOLs, tax credits and other net deferred tax assets due to the uncertainty of the ultimate realization of the future benefits of those assets. The Company's NOLs may expire unutilized or underutilized, which would prevent the Company from offsetting future taxable income.

Uncertain Tax Positions

A reconciliation of the Company's unrecognized tax benefits for the years ended December 31, 2013 and 2014 is as follows (in thousands):

	December 31,	
	2013	2014
Balance at beginning of year	$587	$ 695
Reductions based on tax positions related to prior year	—	(412)
Additions based on tax positions related to current year	108	225
Balance at end of year	$695	$ 508

There were no unrecognized tax benefits included in the balance sheet that would, if recognized, affect the effective tax rate.

The Company does not foresee material changes to its gross uncertain income tax position liability within the next 12 months.

The Company files income tax returns in the United States and state jurisdictions. The federal and state income tax returns are open under the statute of limitations subject to tax examinations for the tax years ended December 31, 2010 through December 31, 2013. To the extent the Company has tax attribute carryforwards, the tax years in which the attribute was generated may still be adjusted upon examination by the IRS or state tax authorities to the extent utilized in a future period.

The Company will recognize accrued interest and penalties related to unrecognized tax benefits as income tax expense in its statements of operations. At December 31, 2014, the amount of interest and penalties the Company has recorded was zero.

15. Employee Benefit Plan

The Company sponsors a 401(k) plan. All employees are eligible to participate in the 401(k) plan after meeting certain eligibility requirements. Participants may elect to have a portion of their salary deferred and contributed to the 401(k) plan up to the limit allowed under the Internal Revenue Code. The Company has made no contributions to the 401(k) plan since inception.

16. Net Loss per Common Share and Pro Forma Net Loss per Common Share (Unaudited)

Net Loss per Common Share

Since the Company was in a loss position for all periods presented, basic net loss per common share is the same as diluted net loss per common share for all periods presented as the inclusion of all potential common

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

shares outstanding would have been anti-dilutive. Potentially dilutive securities that were not included in the diluted per common share calculations because they would be anti-dilutive were as follows:

	December 31,	
	2013	2014
Convertible preferred stock	22,041,003	69,608,339
Options to purchase common stock	4,029,331	5,970,382
Convertible preferred stock warrants	108,006	108,006
Common stock warrants	722,954	1,154,270
Convertible notes	9,766,261	—
Total	36,667,555	76,840,997

Pro Forma Net Loss per Common Share (Unaudited)

The Company has presented pro forma basic and diluted net loss per common share, which has been computed to give effect to the conversion of all shares of convertible preferred stock into shares of common stock as if such conversion had occurred as of the beginning of the period presented or the original date of issuance, if later. The following table sets forth the computation of the Company's pro forma basic and diluted net loss per common share (in thousands, except share and per share amounts):

	Year Ended December 31, 2014
Net loss	$ (17,014)
Change in fair value of convertible preferred stock warrant liability	28
Interest expense associated with convertible promissory notes payable to related parties	266
Interest expense associated with beneficial conversion feature and warrants related to convertible promissory notes payable to related parties	1,998
Gain from preferred stock derivative liability revaluation	(1,475)
Gain on extinguishment of convertible promissory notes	(3,553)
Net loss used in computing pro forma net loss per common share, basic and diluted	$ (19,750)
Shares used in computing net loss per common share, basic and diluted	320,686
Pro forma adjustments to reflect assumed conversion of convertible preferred stock and convertible promissory notes to related parties	27,722,141
Shares used in computing pro forma net loss per common share, basic and diluted	28,042,827
Pro forma net loss per common share, basic and diluted	$ (0.70)

17. Subsequent Events

Novartis Agreement

In March 2015, the Company entered into a collaboration and license agreement with Novartis Pharmaceuticals Corporation, or Novartis, pursuant to which the Company is collaborating worldwide with Novartis regarding the development and commercialization of products containing an agonist of the molecular target known as Stimulator of Interferon Genes, or STING, in the field of oncology, including immuno-oncology and cancer vaccines. Under this agreement, or the Novartis Agreement, the Company granted Novartis a co-exclusive license to develop such products worldwide, an exclusive license to commercialize such products

outside the United States and a non-exclusive license to support the Company in commercializing such products in the United States if it requests such support. The collaboration is guided by a joint steering committee with each party having final decision making authority regarding specified areas of development or commercialization.

Under the Novartis Agreement, the Company received an upfront payment of $200 million from Novartis. The Company is also eligible to receive up to an additional $250 million in development milestones and up to an additional $250 million in regulatory approval milestones.

The Company is responsible for 38% of the joint development costs worldwide and Novartis is responsible for the remaining 62% of the joint development costs worldwide. The Company will also receive 50% of all profits for any products commercialized pursuant to this collaboration in the United States and 45% of all profits for specified European countries and Japan. For each of these profit share countries, each party will be responsible for its respective commercial sharing percentage of all joint commercialization costs incurred in that country. For all other countries where the Company is not sharing profits, Novartis will be responsible for all commercialization costs and will pay the Company a royalty in the mid-teens on all net sales of product sold by Novartis, its affiliates and sublicensees, with such percentage subject to reduction post patent and data exclusivity expiration and subject to reduction, capped at a specified percentage, for royalties payable to third party licensors. Novartis' royalty obligation will run on a country-by-country basis until the later of expiration of the last valid claim covering the product, expiration of data exclusivity for the product and 12 years after first commercial sale of the product in such country.

With respect to the United States, specified European countries and/or Japan, the Company may elect for such region to either reduce by 50% or to eliminate in full the Company's development cost sharing obligation. If the Company elects to reduce its cost sharing percentage by 50% in any such region, then its profit share in such region will also be reduced by 50%. If the Company elects to eliminate its development cost sharing obligation, then such region will be removed from the profit share, and instead Novartis will owe the Company royalties on net sales of product for such region, as described above.

Novartis Stock Purchase

Concurrent with the entry into the Novartis Agreement, the Company and Novartis Institutes for BioMedical Research, Inc., or NIBR, entered into a stock purchase agreement to purchase 2,361,029 shares of the Company's Series E Preferred Stock (or 1,699,940 shares of common stock on an as-converted basis), representing 2.7% of the Company's then-outstanding equity and convertible securities, for $25.0 million. Under the stock purchase agreement, NIBR is committed to purchase an additional $25.0 million of the Company's common stock concurrent with the completion of this offering at the initial price per share offered to the public. If this offering is not completed by December 15, 2015, NIBR will purchase 2,361,029 shares of the Company's Series E Preferred Stock (or 1,699,940 shares of common stock on an as-converted basis) for $25.0 million.

Reverse Stock Split

On April 1, 2015, the Company effected a 0.72-for-1 reverse split of its common stock. Upon the effectiveness of the reverse stock split, (i) every 1 share of outstanding common stock was combined into 0.72 of a share of common stock, (ii) the number of shares of common stock for which each outstanding option or warrant to purchase common stock is exercisable was proportionally decreased on a 0.72-for-1 basis, (iii) the exercise price of each outstanding option or warrant to purchase common stock was proportionately increased on a 0.72-for-1 basis, and (iv) the conversion ratio for each share of preferred stock which is convertible into the Company's common stock was proportionately reduced on a 0.72-for-1 basis. All of the outstanding common

ADURO BIOTECH, INC.
Notes to Consolidated Financial Statements (continued)

stock share numbers (including shares of common stock which the Company's outstanding preferred stock shares are convertible into), warrants, share prices, exercise prices and per share amounts have been adjusted in this prospectus, on a retroactive basis, to reflect this 0.72-for-1 reverse stock split for all periods presented. The par value per share and the authorized number of shares of common stock and preferred stock were not adjusted as a result of the reverse stock split.

Subsequent events have been evaluated through April 3, 2015 which is the date the financial statements were available to be issued.

Through and including , 2015, (the 25th day after the date of this prospectus), all dealers effecting transactions in the Common Stock, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

5,000,000 Shares

Common Stock

PROSPECTUS

BofA Merrill Lynch

Leerink Partners

William Blair

Canaccord Genuity

, 2015

PART II

Information Not Required in Prospectus

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth the costs and expenses, other than the underwriting discount, payable in connection with the sale and distribution of the securities being registered. All amounts are estimated except the SEC registration fee, the FINRA filing fee and the NASDAQ listing fee. Except as otherwise noted, all the expenses below will be paid by us.

SEC registration fee	$ 10,691
FINRA filing fee	14,300
NASDAQ initial listing fee	125,000
Legal fees and expenses	1,500,000
Accounting fees and expenses	960,000
Printing and engraving expenses	225,000
Transfer agent and registrar fees and expenses	10,000
Miscellaneous fees and expenses	155,009
Total	$ 3,000,000

Item 14. Indemnification of Directors and Officers

Section 145 of the Delaware General Corporation Law authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities, including reimbursement for expenses incurred, arising under the Securities Act of 1933, as amended. Our amended and restated certificate of incorporation to be in effect immediately following the closing of this offering provides for indemnification of our directors, officers, employees and other agents to the maximum extent permitted by the Delaware General Corporation Law, and our amended and restated bylaws to be in effect immediately following the closing of this offering provide for indemnification of our directors, officers, employees and other agents to the maximum extent permitted by the Delaware General Corporation Law.

We have entered into indemnification agreements with our directors and executive officers, whereby we have agreed to indemnify our directors and executive officers to the fullest extent permitted by law, including indemnification against expenses and liabilities incurred in legal proceedings to which the director or executive officer was, or is threatened to be made, a party by reason of the fact that such director or executive officer is or was our director, officer, employee or agent, provided that such director or executive officer acted in good faith and in a manner that the director or executive officer reasonably believed to be in, or not opposed to, the our best interest. At present, there is no pending litigation or proceeding involving any of our directors or executive officers regarding which indemnification is sought, nor are we aware of any threatened litigation that may result in claims for indemnification.

We maintain insurance policies that indemnify our directors and officers against various liabilities arising under the Securities Act of 1933, as amended, and the Securities Exchange Act of 1934, as amended, that might be incurred by any director or officer in his capacity as such.

The underwriters are obligated, under certain circumstances, pursuant to the underwriting agreement to be filed as Exhibit 1.1 hereto, to indemnify us, our officers and our directors against liabilities under the Securities Act of 1933, as amended.

Item 15. Recent Sales of Unregistered Securities.

The following sets forth information regarding all unregistered securities sold since July 1, 2011:

(a) From July 1, 2011 to date, we have granted stock options under our 2009 Stock Plan to purchase an aggregate of 8,589,071 shares of our common stock at an exercise price ranging between $0.44 and $7.44 per share to a total of 72 employees, directors and consultants. From July 1, 2011 to date, options to purchase an aggregate of 177,233 shares of common stock have been exercised.

(b) In October 2011, we issued an aggregate of 2,815,822 shares of our Series B convertible preferred stock (convertible into 2,027,388 shares of common stock) to seven accredited investors at a price per share of $1.19, for aggregate consideration of $3.4 million.

(c) In August 2012, we issued an aggregate of 2,396,968 shares of our Series B convertible preferred stock (convertible into 1,725,813 shares of common stock) to seven accredited investors at a price per share of $1.19, for aggregate consideration of $2.9 million.

(d) In January 2013, we issued an aggregate of 6,986,656 shares of our Series B convertible preferred stock (convertible into 5,030,386 shares of common stock) to 11 accredited investors at a price per share of $1.19, for aggregate consideration of $8.3 million.

(e) In February 2013, we issued an aggregate of 214,382 shares of our Series B convertible preferred stock (convertible into 154,354 shares of common stock) to two accredited investors at a price per share of $1.19, for aggregate consideration of $0.3 million.

(f) In August 2013, we issued and sold to an investor convertible promissory notes in the aggregate principal amount of $7.0 million, which notes bore interest at a rate of 5% per annum. This note converted into shares of our Series C convertible preferred stock in May 2014 as described in paragraph (l) below.

(g) In September 2013, we issued and sold to investors convertible promissory notes in the aggregate principal amount of $0.8 million, which notes bore interest at a rate of 5% per annum. These notes converted into shares of our Series C convertible preferred stock in May 2014 as described in paragraph (l) below.

(h) In October 2013, we issued and sold to investors convertible promissory notes in the aggregate principal amount of $3.2 million, which notes bore interest at a rate of 5% per annum. These notes converted into shares of our Series C convertible preferred stock in May 2014 as described in paragraph (l) below.

(i) In December 2013, we issued and sold to investors convertible promissory notes in the aggregate principal amount of $1.7 million, which notes bore interest at a rate of 5% per annum. These notes converted into shares of our Series C convertible preferred stock in May 2014 as described in paragraph (l) below.

(j) In January 2014, we issued and sold to investors convertible promissory notes in the aggregate principal amount of $0.3 million, which notes bore interest at a rate of 5% per annum. These notes converted into shares of our Series C convertible preferred stock in May 2014 as described in paragraph (l) below.

(k) In May 2014, an aggregate principal amount of $1.6 million of convertible notes converted into 1,373,893 shares of our Series B convertible preferred stock (convertible into 989,166 shares of common stock) at a price per share of $1.19.

(l) In May 2014, we issued an aggregate of 12,511,523 shares of our Series C convertible preferred stock (convertible into 9,008,292 shares of common stock) to nine accredited investors at a price per share of $2.17, for aggregate consideration of $27.1 million. In addition, the aggregate principal and interest amount of $13.5 million of convertible notes referred to in paragraphs (f), (g), (h), (i) and (j) above converted into 6,119,217 shares of Series C convertible preferred stock at a conversion price equal to $2.17.

(m) In September 2014, we issued 4,608,295 shares of our Series C convertible preferred stock (convertible into 3,317,972 shares of common stock) to one accredited investors at a price per share of $2.17, for aggregate consideration of $10.0 million.

(n) In November 2014, an aggregate principal amount of $1.9 million of convertible notes converted into 1,558,138 shares of our Series B convertible preferred stock (convertible into 1,121,859 shares of common stock) at a price per share of $1.19.

(o) In December 2014, we issued 2,304,148 shares of our Series C convertible preferred stock (convertible into 1,658,986 shares of common stock) to one accredited investor at a price per share of $2.17, for aggregate consideration of $5.0 million.

(p) In December 2014, we issued an aggregate of 19,012,173 shares of our Series D convertible preferred stock (convertible into 13,688,749 shares of common stock) to 28 accredited investors at a price per share of $2.70, for aggregate consideration of $51.4 million.

(q) In March 2015, we issued an aggregate of 2,361,029 shares of our Series E convertible preferred stock (convertible into 1,699,940 shares of common stock) to one accredited investor at a price per share of $10.59, for aggregate consideration of $25.0 million.

The offers, sales and issuances of the securities described in Item 15(a) were deemed to be exempt from registration under the Securities Act under either (1) Rule 701 promulgated under the Securities Act as offers and sale of securities pursuant to certain compensatory benefit plans and contracts relating to compensation in compliance with Rule 701 or (2) Section 4(2) of the Securities Act as transactions by an issuer not involving any public offering. The recipients of securities in each of these transactions represented their intention to acquire the securities for investment only and not with view to or for sale in connection with any distribution thereof and appropriate legends were affixed to the stock certificates and instruments issued in such transactions.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits.

Exhibit No.	Description of Exhibit
1.1	Form of Underwriting Agreement.
3.1	Amended and Restated Certificate of Incorporation of Aduro Biotech, Inc., as currently in effect.
3.2	Certificate of Amendment of Amended and Restated Certificate of Incorporation of the Registrant, filed on April 1, 2015.
3.3	Form of Restated Certificate of Incorporation of Aduro Biotech, Inc., to be in effect immediately following the closing of this offering.
3.4#	Bylaws of Aduro Biotech, Inc., as currently in effect.
3.5	Form of Amended and Restated Bylaws of Aduro Biotech, Inc., to be in effect immediately following the closing of this offering.
4.1	Form of common stock certificate.
4.2#	Amended and Restated Investor Rights Agreement, by and among Aduro Biotech, Inc. and the stockholders named therein, dated December 19, 2014.

Exhibit No.	Description of Exhibit
5.1	Opinion of Cooley LLP.
10.1#	2000 Oncologic Equity Incentive Plan.
10.2#	Forms of Stock Option Agreement and Notice of Grant of Stock Option under the 2000 Oncologic Equity Incentive Plan.
10.3#	2001 Triton BioSystems Equity Incentive Plan.
10.4#	Forms of Stock Option Agreement and Notice of Grant of Stock Option under the 2001 Triton BioSystems Equity Incentive Plan.
10.5#	Aduro Biotech 2009 Stock Incentive Plan.
10.6#	Forms of Stock Option Agreement and Notice of Grant of Stock Option under the 2009 Stock Plan.
10.7	2015 Equity Incentive Plan, to be in effect upon completion of this offering.
10.8	Forms of Stock Option Agreement and Notice of Grant of Stock Option under the 2015 Equity Incentive Plan.
10.9	2015 Employee Stock Purchase Plan, to be in effect upon completion of this offering.
10.10#	Form of Indemnification Agreement made by and between Aduro Biotech, Inc. and each of its directors and executive officers.
10.11#	Executive Employment Agreement between Aduro Biotech, Inc. and Stephen T. Isaacs, dated as of February 26, 2010.
10.12#	Amendment to Executive Employment Agreement between Aduro Biotech, Inc. and Stephen T. Isaacs, dated as of July 31, 2014.
10.13#	Offer of Employment Letter between Aduro Biotech, Inc. and Gregory W. Schafer, dated as of April 28, 2013.
10.14#	Severance Agreement between Aduro Biotech, Inc. and Gregory W. Schafer, dated as of July 31, 2014.
10.15#	Offer of Employment Letter between Aduro Biotech, Inc. and Thomas Dubensky, dated September 7, 2011.
10.16#	Severance Agreement between Aduro Biotech, Inc. and Thomas Dubensky, dated as of July 31, 2014.
10.17+#	Research and License Agreement between Aduro Biotech, Inc. and Janssen Biotech, Inc., dated as of May 27, 2014.
10.18+#	GVAX Prostate License Agreement between Aduro Biotech, Inc. and Janssen Biotech, Inc., dated as of May 27, 2014.
10.19+#	Research and License Agreement between Aduro Biotech, Inc. and Janssen Biotech, Inc., dated as of October 13, 2014.
10.20+#	Exclusive License Agreement between Aduro Biotech, Inc. and The Johns Hopkins University, dated March 24, 2011.
10.21+#	Exclusive License Agreement between Aduro Biotech, Inc. and the Regents of the University of California, dated March 15, 2012.

Exhibit No.	Description of Exhibit
10.22+#	Asset Purchase Agreement between Aduro GVAX Inc. and BioSante Pharmaceuticals, Inc., dated January 31, 2013.
10.23+#	Patent and Technology License and Materials Transfer Agreement between Aduro Biotech, Inc. and The Johns Hopkins University, dated January 31, 2013.
10.24+#	Restated and Amended License Agreement between The Johns Hopkins University and BioSante Pharmaceuticals, Inc., dated March 3, 2011.
10.25+#	License Agreement between Karagen Pharmaceuticals, Inc. and Aduro Biotech, Inc., dated June 20, 2012.
10.26+#	Exclusive License between Aduro Biotech, Inc. and the Regents of the University of California, dated September 25, 2014.
10.27+#	Exclusive License Agreement among Aduro Biotech, Inc., Memorial Sloan Kettering Cancer Center, The Rockefeller University, Rutgers, the State University of New Jersey and University of Bonn, dated December 18, 2014.
10.28+#	Manufacturing Services Agreement between Lonza Walkersville, Inc. and Aduro Biotech, Inc., dated August 6, 2013.
10.29+#	Process Development and Manufacturing Services Agreement between IDT Biologika GmbH and Aduro Biotech, Inc., dated December 12, 2013.
10.30#	Fourth Addendum to Office Lease, dated February 20, 2015, by and between the Company and Bancroft Way, LLC.
10.31+#	Amendment No. 1 to Exclusive License between Aduro Biotech, Inc. and the Regents of the University of California, dated March 6, 2015.
10.32#	Aduro Biotech, Inc. Severance Plan and Summary Plan Description.
10.33	Aduro Biotech, Inc. Non-Employee Director Compensation Policy.
10.34+	Collaboration and License Agreement between Aduro Biotech, Inc. and Novartis Pharmaceuticals Corporation, dated March 12, 2015; and the related letter agreement dated March 19, 2015.
10.35	Series E Preferred Stock Purchase Agreement between Aduro Biotech, Inc. and Novartis Institutes for BioMedical Research, Inc., dated March 12, 2015.
10.36	Common Stock Purchase Agreement between Aduro Biotech, Inc. and Novartis Institutes for BioMedical Research, Inc., dated March 12, 2015.
23.1	Consent of Cooley LLP (included in Exhibit 5.1).
23.2	Consent of Deloitte & Touche LLP, independent registered public accounting firm.
24.1#	Power of Attorney.

\+ Confidential treatment requested.
\# Previously filed.

(b) Financial statement schedules.

All schedules have been omitted because the information required to be presented in them is not applicable or is shown in the financial statements or related notes.

Item 17. Undertakings

The undersigned Registrant hereby undertakes to provide to the underwriters at the closing specified in the Underwriting Agreement, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this Registration Statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this Registration Statement as of the time it was declared effective.

(2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, we have duly caused this Registration Statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Berkeley, State of California, on the 6th day of April, 2015.

ADURO BIOTECH, INC.

By: /s/ Stephen T. Isaacs
Stephen T. Isaacs
Chairman, President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Stephen T. Isaacs Stephen T. Isaacs	Chairman, President and Chief Executive Officer *(principal executive officer)*	April 6, 2015
/s/ Gregory W. Schafer Gregory W. Schafer	Chief Operating Officer (*principal financial officer*)	April 6, 2015
/s/ Jennifer Lew Jennifer Lew	Senior Vice President of Finance (*principal accounting officer*)	April 6, 2015
* Gerald Chan, DSc	Director	April 6, 2015
* William M. Greenman	Director	April 6, 2015
* Ross Haghighat	Director	April 6, 2015
* Frank McCormick	Director	April 6, 2015
* Stephanie Monaghan O'Brien	Director	April 6, 2015

By: /s/ Stephen T. Isaacs
Stephen T. Isaacs
Attorney-in-Fact

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EXHIBIT INDEX

Exhibit No.	Description of Exhibit
1.1	Form of Underwriting Agreement.
3.1	Amended and Restated Certificate of Incorporation of Aduro Biotech, Inc., as currently in effect.
3.2	Certificate of Amendment of Amended and Restated Certificate of Incorporation of the Registrant filed on April 1, 2015.
3.3	Form of Restated Certificate of Incorporation of Aduro Biotech, Inc., to be in effect immediately following the closing of this offering.
3.4#	Bylaws of Aduro Biotech, Inc., as currently in effect.
3.5	Form of Amended and Restated Bylaws of Aduro Biotech, Inc., to be in effect immediately following the closing of this offering.
4.1	Form of common stock certificate.
4.2#	Amended and Restated Investor Rights Agreement, by and among Aduro Biotech, Inc. and the stockholders named therein, dated December 19, 2014.
5.1	Opinion of Cooley LLP.
10.1#	2000 Oncologic Equity Incentive Plan.
10.2#	Forms of Stock Option Agreement and Notice of Grant of Stock Option under the 2000 Oncologic Equity Incentive Plan.
10.3#	2001 Triton BioSystems Equity Incentive Plan.
10.4#	Forms of Stock Option Agreement and Notice of Grant of Stock Option under the 2001 Triton BioSystems Equity Incentive Plan.
10.5#	Aduro Biotech 2009 Stock Incentive Plan.
10.6#	Forms of Stock Option Agreement and Notice of Grant of Stock Option under the 2009 Stock Plan.
10.7	2015 Equity Incentive Plan, to be in effect upon completion of this offering.
10.8	Forms of Stock Option Agreement and Notice of Grant of Stock Option under the 2015 Equity Incentive Plan.
10.9	2015 Employee Stock Purchase Plan, to be in effect upon completion of this offering.
10.10#	Form of Indemnification Agreement made by and between Aduro Biotech, Inc. and each of its directors and executive officers.
10.11#	Executive Employment Agreement between Aduro Biotech, Inc. and Stephen T. Isaacs, dated as of February 26, 2010.
10.12#	Amendment to Executive Employment Agreement between Aduro Biotech, Inc. and Stephen T. Isaacs, dated as of July 31, 2014.
10.13#	Offer of Employment Letter between Aduro Biotech, Inc. and Gregory W. Schafer, dated as of April 28, 2013.
10.14#	Severance Agreement between Aduro Biotech, Inc. and Gregory W. Schafer, dated as of July 31, 2014.
10.15#	Offer of Employment Letter between Aduro Biotech, Inc. and Thomas Dubensky, dated September 7, 2011.
10.16#	Severance Agreement between Aduro Biotech, Inc. and Thomas Dubensky, dated as of July 31, 2014.

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Exhibit No.	Description of Exhibit
10.17+#	Research and License Agreement between Aduro Biotech, Inc. and Janssen Biotech, Inc., dated as of May 27, 2014.
10.18+#	GVAX Prostate License Agreement between Aduro Biotech, Inc. and Janssen Biotech, Inc., dated as of May 27, 2014.
10.19+#	Research and License Agreement between Aduro Biotech, Inc. and Janssen Biotech, Inc., dated as of October 13, 2014.
10.20+#	Exclusive License Agreement between Aduro Biotech, Inc. and The Johns Hopkins University, dated March 24, 2011.
10.21+#	Exclusive License Agreement between Aduro Biotech, Inc. and the Regents of the University of California, dated March 15, 2012.
10.22+#	Asset Purchase Agreement between Aduro GVAX Inc. and BioSante Pharmaceuticals, Inc., dated January 31, 2013.
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23.1	Consent of Cooley LLP (included in Exhibit 5.1).
23.2	Consent of Deloitte & Touche LLP, independent registered public accounting firm.
24.1#	Power of Attorney.

+ Confidential treatment requested.
# Previously filed.

Exhibit 1.1

ADURO BIOTECH, INC.

(a Delaware corporation)

[—] Shares of Common Stock

UNDERWRITING AGREEMENT

Dated: [—], 2015

ADURO BIOTECH, INC.

(a Delaware corporation)

[—] Shares of Common Stock

UNDERWRITING AGREEMENT

[—], 2015

Merrill Lynch, Pierce, Fenner & Smith
Incorporated
Leerink Partners LLC
as Representatives of the several Underwriters
c/o Merrill Lynch, Pierce, Fenner & Smith
Incorporated
One Bryant Park
New York, New York 10036

Ladies and Gentlemen:

Aduro Biotech, Inc., a Delaware corporation (the "Company"), confirms its agreement with Merrill Lynch, Pierce, Fenner & Smith Incorporated ("Merrill Lynch"), Leerink Partners LLC ("Leerink") and each of the other Underwriters named in Schedule A hereto (collectively, the "Underwriters," which term shall also include any underwriter substituted as hereinafter provided in Section 10 hereof), for whom Merrill Lynch and Leerink are acting as representatives (in such capacity, the "Representatives"), with respect to (i) the sale by the Company and the purchase by the Underwriters, acting severally and not jointly, of the respective numbers of shares of Common Stock, par value $0.0001 per share, of the Company ("Common Stock") set forth in Schedule A hereto and (ii) the grant by the Company to the Underwriters, acting severally and not jointly, of the option described in Section 2(b) hereof to purchase all or any part of [—] additional shares of Common Stock. The aforesaid [—] shares of Common Stock (the "Initial Securities") to be purchased by the Underwriters and all or any part of the [—] shares of Common Stock subject to the option described in Section 2(b) hereof (the "Option Securities") are herein called, collectively, the "Securities."

The Company understands that the Underwriters propose to make a public offering of the Securities as soon as the Representatives deem advisable after this Agreement has been executed and delivered.

The Company and the Underwriters agree that up to [—] shares of the Initial Securities to be purchased by the Underwriters (the "Reserved Securities") shall be reserved for sale by the Underwriters to certain persons designated by the Company (the "Invitees"), as part of the distribution of the Securities by the Underwriters, subject to the terms of this Agreement, the applicable rules, regulations and interpretations of the Financial Industry Regulatory Authority, Inc. ("FINRA") and all other applicable laws, rules and regulations. The Company solely determined, without any direct or indirect participation by the Underwriters, the Invitees who will purchase Reserved Securities (including the amount to be purchased by such persons) sold by the Underwriters. To the extent that such Reserved Securities are not orally confirmed for purchase by Invitees by 8:00 A.M. (New York City time) on the first business day after the date of this Agreement, such Reserved Securities may be offered to the public as part of the public offering contemplated hereby.

The Company has filed with the Securities and Exchange Commission (the "Commission") a registration statement on Form S-1 (No. 333-202667), including the related preliminary prospectus or prospectuses, covering the registration of the sale of the Securities under the Securities Act of 1933, as amended (the "1933 Act"). Promptly after execution and delivery of this Agreement, the Company will prepare and file a prospectus in accordance with the provisions of Rule 430A ("Rule 430A") of the rules and regulations of the Commission under the 1933 Act (the "1933 Act Regulations") and Rule 424(b) ("Rule 424(b)") of the 1933 Act Regulations. The information included in such prospectus that was omitted from such registration statement at the time it became effective but that is deemed to be part of such registration statement at the time it became effective pursuant to Rule 430A(b) is herein called the "Rule 430A Information." Such registration statement, including the amendments thereto, the exhibits thereto and any schedules thereto, at the time it became effective, and including the Rule 430A Information, is herein called the "Registration Statement." Any registration statement filed pursuant to Rule 462(b) of the 1933 Act Regulations is herein called the "Rule 462(b) Registration Statement" and, after such filing, the term "Registration Statement" shall include the Rule 462(b) Registration Statement. Each prospectus used prior to the effectiveness of the Registration Statement, and each prospectus that omitted the Rule 430A Information that was used after such effectiveness and prior to the execution and delivery of this Agreement, is herein called a "preliminary prospectus." The final prospectus, in the form first furnished to the Underwriters for use in connection with the offering of the Securities, is herein called the "Prospectus." For purposes of this Agreement, all references to the Registration Statement, any preliminary prospectus, the Prospectus or any amendment or supplement to any of the foregoing shall be deemed to include the copy filed with the Commission pursuant to its Electronic Data Gathering, Analysis and Retrieval system or any successor system ("EDGAR").

As used in this Agreement:

"Applicable Time" means [—]:00 P./A.M., New York City time, on [—], 2015 or such other time as agreed by the Company and the Representatives.

"General Disclosure Package" means any Issuer General Use Free Writing Prospectuses issued at or prior to the Applicable Time, the most recent preliminary prospectus that is distributed to investors prior to the Applicable Time and the information included on Schedule B-1 hereto, all considered together.

"Issuer Free Writing Prospectus" means any "issuer free writing prospectus," as defined in Rule 433 of the 1933 Act Regulations ("Rule 433"), including without limitation any "free writing prospectus" (as defined in Rule 405 of the 1933 Act Regulations ("Rule 405")) relating to the Securities that is (i) required to be filed with the Commission by the Company, (ii) a "road show that is a written communication" within the meaning of Rule 433(d)(8)(i), whether or not required to be filed with the Commission, or (iii) exempt from filing with the Commission pursuant to Rule 433(d)(5)(i) because it contains a description of the Securities or of the offering that does not reflect the final terms, in each case in the form filed or required to be filed with the Commission or, if not required to be filed, in the form retained in the Company's records pursuant to Rule 433(g).

"Issuer General Use Free Writing Prospectus" means any Issuer Free Writing Prospectus that is intended for general distribution to prospective investors (other than a "*bona fide* electronic road show," as defined in Rule 433 (the "Bona Fide Electronic Road Show")), as evidenced by its being specified in Schedule B-2 hereto.

"Issuer Limited Use Free Writing Prospectus" means any Issuer Free Writing Prospectus that is not an Issuer General Use Free Writing Prospectus.

"Testing-the-Waters Communication" means any oral or written communication with potential investors undertaken in reliance on Section 5(d) of the 1933 Act.

"Written Testing-the-Waters Communication" means any Testing-the-Waters Communication that is a written communication within the meaning of Rule 405 under the 1933 Act.

SECTION 1. Representations and Warranties.

(a) *Representations and Warranties by the Company*. The Company represents and warrants to each Underwriter as of the date hereof, the Applicable Time, the Closing Time (as defined below) and any Date of Delivery (as defined below), and agrees with each Underwriter, as follows:

(i) Registration Statement and Prospectuses. Each of the Registration Statement and any post-effective amendment thereto has become effective under the 1933 Act. No stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto has been issued under the 1933 Act, no order preventing or suspending the use of any preliminary prospectus or the Prospectus has been issued and no proceedings for any of those purposes have been instituted or are pending or, to the Company's knowledge, contemplated by the Commission. The Company has complied with each request (if any) from the Commission for additional information.

Each of the Registration Statement and any post-effective amendment thereto, at the time it became effective, complied in all material respects with the requirements of the 1933 Act and the 1933 Act Regulations. Each preliminary prospectus, the Prospectus and any amendment or supplement thereto, at the time each was filed with the Commission, complied in all material respects with the requirements of the 1933 Act and the 1933 Act Regulations. Each preliminary prospectus delivered to the Underwriters for use in connection with this offering and the Prospectus was or will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

(ii) Accurate Disclosure. Neither the Registration Statement nor any amendment thereto, at its effective time, at the Closing Time or at any Date of Delivery, contained, contains or will contain an untrue statement of a material fact or omitted, omits or will omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. As of the Applicable Time, none of (A) the General Disclosure Package, (B) any individual Issuer Limited Use Free Writing Prospectus, when considered together with the General Disclosure Package and (C) any individual Written Testing-the-Waters Communication, when considered together with the General Disclosure Package, included, includes or will include an untrue statement of a material fact or omitted, omits or will omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. Neither the Prospectus nor any amendment or supplement thereto (including any prospectus wrapper), as of its issue date, at the time of any filing with the Commission pursuant to Rule 424(b), at the Closing Time or at any Date of Delivery, included, includes or will include an untrue statement of a material fact or omitted, omits or will omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

The representations and warranties in this subsection shall not apply to statements in or omissions from the Registration Statement (or any amendment thereto), the General Disclosure Package or the Prospectus (or any amendment or supplement thereto) made in reliance upon and in conformity with written information furnished to the Company by any Underwriter through the Representatives expressly for use therein. For purposes of this Agreement, the only information so furnished shall be the information in the first paragraph under the heading "Underwriting–Commissions and Discounts," the information in the second, third and fourth paragraphs under the heading "Underwriting–Price Stabilization, Short Positions and Penalty Bids" and the information under the heading "Underwriting–Electronic Distribution" in each case contained in the Prospectus (collectively, the "Underwriter Information").

(iii) Issuer Free Writing Prospectuses. No Issuer Free Writing Prospectus conflicts or will conflict with the information contained in the Registration Statement or the Prospectus, and any preliminary or other prospectus deemed to be a part thereof that has not been superseded or modified. The representations and warranties in this subsection shall not apply to statements in or omissions from any Issuer Free Writing Prospectus made in reliance upon and in conformity with the Underwriter Information. The Company has made available a Bona Fide Electronic Road Show in compliance with Rule 433(d)(8)(ii) such that no filing of any "road show" (as defined in Rule 433(h)) is required in connection with the offering of the Securities.

(iv) Testing-the-Waters Materials. The Company (A) has not engaged in any Testing-the-Waters Communication other than Testing-the-Waters Communications with the consent of the Representatives with entities that it has reasonable basis to believe are qualified institutional buyers within the meaning of Rule 144A under the 1933 Act or institutions that are accredited investors within the meaning of Rule 501 under the 1933 Act and (B) has not authorized anyone other than the Representatives to engage in Testing-the-Waters Communications. The Company reconfirms that the Representatives have been authorized to act on its behalf in undertaking Testing-the-Waters Communications. The Company has not distributed any Written Testing-the-Waters Communications other than those listed on Schedule B-3 hereto.

(v) Company Not Ineligible Issuer. At the time of filing the Registration Statement and any post-effective amendment thereto, at the earliest time thereafter that the Company or another offering participant made a *bona fide* offer (within the meaning of Rule 164(h)(2) of the 1933 Act Regulations) of the Securities and at the date hereof, the Company was not and is not an "ineligible issuer," as defined in Rule 405, without taking account of any determination by the Commission pursuant to Rule 405 that it is not necessary that the Company be considered an ineligible issuer.

(vi) Emerging Growth Company Status. From the time of the initial confidential submission of the Registration Statement to the Commission (or, if earlier, the first date on which the Company engaged directly or through any Person authorized to act on its behalf in any Testing-the-Waters Communication) through the date hereof, the Company has been and is an "emerging growth company," as defined in Section 2(a) of the 1933 Act (an "Emerging Growth Company").

(vii) Independent Accountants. The accountants who certified the consolidated financial statements and supporting schedules included in the Registration Statement, the General Disclosure Package and the Prospectus are independent public accountants with respect to the Company as required by the 1933 Act, the 1933 Act Regulations and the Public Company Accounting Oversight Board.

(viii) Financial Statements. The consolidated financial statements included in the Registration Statement, the General Disclosure Package and the Prospectus, together with the related schedules and notes, present fairly, in all material respects, the financial position of the Company and its consolidated subsidiaries at the dates indicated and the statement of operations, stockholders' equity and cash flows of the Company and its consolidated subsidiaries for the periods specified; said financial statements have been prepared in conformity with U.S. generally accepted accounting principles ("GAAP") applied on a consistent basis throughout the periods involved except, in the case of unaudited financial statements, subject to normal year end audit adjustments and the exclusion of certain footnotes as permitted by the applicable rules of the Commission. The supporting schedules, if any, present fairly, in all material respects, in accordance with GAAP the information required to be stated therein. The selected historical financial data set forth under the caption "Summary—Summary Consolidated Financial Data" and "Selected Consolidated Financial Data" included in the Registration Statement, the General Disclosure Package and the Prospectus present fairly, in all material respects, the information shown therein and have been compiled on a basis consistent with that of the audited financial statements included therein. Except as included therein, no historical or pro forma financial statements or supporting schedules are required to be included or incorporated by reference in the Registration Statement, the General Disclosure Package or the Prospectus under the 1933 Act or the 1933 Act Regulations.

(ix) No Material Adverse Change in Business. Except as otherwise stated therein, since the respective dates as of which information is given in the Registration Statement, the General Disclosure Package or the Prospectus, (A) there has been no material adverse change in the condition, financial or otherwise, or in the earnings, business operations or business prospects of the Company and its subsidiaries considered as one enterprise, whether or not arising in the ordinary course of business (a "Material Adverse Effect"), (B) there have been no transactions entered into by the Company or any of its subsidiaries, other than those in the ordinary course of business, which are material with respect to the Company and its subsidiaries considered as one enterprise, and (C) there has been no dividend or distribution of any kind declared, paid or made by the Company on any class of its capital stock.

(x) Good Standing of the Company. The Company has been duly incorporated and is validly existing as a corporation in good standing under the laws of the State of Delaware and has corporate power and authority to own, lease and operate its properties and to conduct its business as described in the Registration Statement, the General Disclosure Package and the Prospectus and to enter into and perform its obligations under this Agreement; and the Company is duly qualified as a foreign corporation to transact business and is in good standing in each other jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except where the failure so to qualify or to be in good standing would not reasonably be expected to result in a Material Adverse Effect.

(xi) Good Standing of Subsidiaries. Each "significant subsidiary" of the Company (as such term is defined in Rule 1-02 of Regulation S-X) (each, a "Subsidiary" and, collectively, the "Subsidiaries") has been duly organized and is validly existing in good standing under the laws of the jurisdiction of its incorporation or organization, has corporate or similar power and authority to own, lease and operate its properties and to conduct its business as described in the Registration Statement, the General Disclosure Package and the Prospectus and is duly qualified to transact business and is in good standing in each jurisdiction in which such qualification is required, whether by reason of the ownership or leasing of property or the conduct of business, except where the failure to so qualify or to be in good standing would not result in a Material Adverse Effect. Except as otherwise disclosed in the Registration Statement, the General

Disclosure Package and the Prospectus, all of the issued and outstanding capital stock of each Subsidiary has been duly authorized and validly issued, is fully paid and non-assessable and is owned by the Company, directly or through subsidiaries, free and clear of any security interest, mortgage, pledge, lien, encumbrance, claim or equity. None of the outstanding shares of capital stock of any Subsidiary were issued in violation of the preemptive or similar rights of any securityholder of such Subsidiary. The only subsidiaries of the Company are (A) the subsidiaries listed on Exhibit 21 to the Registration Statement and (B) certain other subsidiaries which, considered in the aggregate as a single subsidiary, do not constitute a "significant subsidiary" as defined in Rule 1-02 of Regulation S-X.

(xii) Capitalization. The authorized, issued and outstanding shares of capital stock of the Company are as set forth in the Registration Statement, the General Disclosure Package and the Prospectus in the column entitled "Actual" under the caption "Capitalization" (except for subsequent issuances, if any, pursuant to this Agreement, pursuant to reservations, agreements or employee benefit plans referred to in the Registration Statement, the General Disclosure Package and the Prospectus or pursuant to the exercise of convertible securities or options referred to in the Registration Statement, the General Disclosure Package and the Prospectus). The outstanding shares of capital stock of the Company have been duly authorized and validly issued and are fully paid and non-assessable. None of the outstanding shares of capital stock of the Company were issued in violation of the preemptive or other similar rights of any securityholder of the Company.

(xiii) Authorization of Agreement. This Agreement has been duly authorized, executed and delivered by the Company.

(xiv) Authorization and Description of Securities. The Securities to be purchased by the Underwriters from the Company have been duly authorized for issuance and sale to the Underwriters pursuant to this Agreement and, when issued and delivered by the Company pursuant to this Agreement against payment of the consideration set forth herein, will be validly issued and fully paid and non-assessable; and the issuance of the Securities is not subject to the preemptive or other similar rights of any securityholder of the Company. The Common Stock conforms in all material respects to all statements relating thereto contained in the Registration Statement, the General Disclosure Package and the Prospectus and such description conforms, in all material respects, to the rights set forth in the instruments defining the same. No holder of Securities will be subject to personal liability by reason of being such a holder.

(xv) Registration Rights. There are no persons with registration rights or other similar rights to have any securities registered for sale pursuant to the Registration Statement or otherwise registered for sale or sold by the Company under the 1933 Act pursuant to this Agreement, other than those rights that have been disclosed in the Registration Statement, the General Disclosure Package and the Prospectus and have been waived.

(xvi) Absence of Violations, Defaults and Conflicts. Neither the Company nor any of its subsidiaries is (A) in violation of its charter, by-laws or similar organizational document, (B) in default in the performance or observance of any obligation, agreement, covenant or condition contained in any contract, indenture, mortgage, deed of trust, loan or credit agreement, note, lease or other agreement or instrument to which the Company or any of its subsidiaries is a party or by which it or any of them may be bound or to which any of the properties or assets of the Company or any subsidiary is subject (collectively, "Agreements and Instruments"), except for such defaults that would not, singly or in the aggregate, reasonably be expected to result in a Material Adverse Effect, or (C) in violation of any law, statute, rule, regulation, judgment, order, writ or decree of any arbitrator, court, governmental body, regulatory body, administrative agency or

other authority, body or agency having jurisdiction over the Company or any of its subsidiaries or any of their respective properties, assets or operations (each, a "Governmental Entity"), except for such violations that would not, singly or in the aggregate, reasonably be expected to result in a Material Adverse Effect. The execution, delivery and performance of this Agreement and the consummation of the transactions contemplated herein and in the Registration Statement, the General Disclosure Package and the Prospectus (including the issuance and sale of the Securities and the use of the proceeds from the sale of the Securities as described therein under the caption "Use of Proceeds") and compliance by the Company with its obligations hereunder have been duly authorized by all necessary corporate action and do not and will not, whether with or without the giving of notice or passage of time or both, conflict with or constitute a breach of, or default or Repayment Event (as defined below) under, or result in the creation or imposition of any lien, charge or encumbrance upon any properties or assets of the Company or any subsidiary pursuant to, the Agreements and Instruments (except for such conflicts, breaches, defaults or Repayment Events or liens, charges or encumbrances that would not, singly or in the aggregate, reasonably be expected to result in a Material Adverse Effect), nor will such action result in any violation of the provisions of the charter, by-laws or similar organizational document of the Company or any of its subsidiaries or, except as would not reasonably be expected to result in a Material Adverse Effect, any law, statute, rule, regulation, judgment, order, writ or decree of any Governmental Entity. As used herein, a "Repayment Event" means any event or condition which gives the holder of any note, debenture or other evidence of indebtedness (or any person acting on such holder's behalf) the right to require the repurchase, redemption or repayment of all or a portion of such indebtedness by the Company or any of its subsidiaries.

(xvii) Absence of Labor Dispute. No labor dispute with the employees of the Company or any of its subsidiaries exists or, to the knowledge of the Company, is imminent, and the Company is not aware of any existing or imminent labor disturbance by the employees of any of its or any subsidiary's principal suppliers, manufacturers, customers or contractors, which, in either case, would reasonably be expected to result in a Material Adverse Effect.

(xviii) Absence of Proceedings. Except as disclosed in the Registration Statement, the General Disclosure Package and the Prospectus, there is no action, suit, proceeding, inquiry or investigation before or brought by any Governmental Entity now pending or, to the knowledge of the Company, threatened, against or affecting the Company or any of its subsidiaries, which would reasonably be expected to result in a Material Adverse Effect, or which might materially and adversely affect their respective properties or assets or the consummation of the transactions contemplated in this Agreement or the performance by the Company of its obligations hereunder; and the aggregate of all pending legal or governmental proceedings to which the Company or any such subsidiary is a party or of which any of their respective properties or assets is the subject which are not described in the Registration Statement, the General Disclosure Package and the Prospectus, including ordinary routine litigation incidental to the business, would not reasonably be expected to result in a Material Adverse Effect.

(xix) Accuracy of Exhibits. There are no contracts or documents which are required to be described in the Registration Statement, the General Disclosure Package or the Prospectus or to be filed as exhibits to the Registration Statement which have not been so described in all material respects and filed as required.

(xx) Absence of Further Requirements. No filing with, or authorization, approval, consent, license, order, registration, qualification or decree of, any Governmental Entity is necessary or required for the performance by the Company of its obligations hereunder, in connection with the offering, issuance or sale of the Securities hereunder or the consummation of

the transactions contemplated by this Agreement, except (A) such as have been already obtained or as may be required under the 1933 Act, the 1933 Act Regulations, the rules of the NASDAQ Stock Market LLC, state securities laws or the rules of FINRA and (B) such as have been obtained under the laws and regulations of jurisdictions outside the United States in which the Reserved Securities were offered.

(xxi) Possession of Licenses and Permits. The Company and its subsidiaries possess such permits, licenses, approvals, consents and other authorizations (collectively, "Governmental Licenses") issued by the appropriate Governmental Entities necessary to conduct the business now operated by them, except where the failure so to possess would not, singly or in the aggregate, reasonably be expected to result in a Material Adverse Effect. The Company and its subsidiaries are in compliance with the terms and conditions of all Governmental Licenses, except where the failure so to comply would not, singly or in the aggregate, reasonably be expected to result in a Material Adverse Effect. All of the Governmental Licenses are valid and in full force and effect, except when the invalidity of such Governmental Licenses or the failure of such Governmental Licenses to be in full force and effect would not, singly or in the aggregate, reasonably be expected to result in a Material Adverse Effect. Neither the Company nor any of its subsidiaries has received any written notice of proceedings relating to the revocation or modification of any Governmental Licenses which, singly or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would reasonably be expected to result in a Material Adverse Effect. The Company and its subsidiaries (i) are, and since January 1, 2012 have been, in compliance with all statutes, rules and regulations applicable to the ownership, testing, development, manufacture, packaging, processing, use, distribution, storage, import, export or disposal of any product manufactured or distributed by or on behalf of the Company or its subsidiaries or out-licensed by the Company ("Applicable Laws"), except where such noncompliance would not, singly or in the aggregate, reasonably be expected to result in a Material Adverse Effect; and (ii) have not received any U.S. Food and Drug Administration ("FDA") Form 483, written notice of adverse finding, warning letter, untitled letter or other written correspondence or written notice from any court or arbitrator or governmental or regulatory authority alleging or asserting non-compliance with any Applicable Laws, except where being in contravention of any of the foregoing representations or warranties, singly or in the aggregate, would not reasonably be expected to have a Material Adverse Effect.

(xxii) Title to Property. The Company and its subsidiaries have good and marketable title to all real property owned by them and good title to all other properties owned by them, in each case, free and clear of all mortgages, pledges, liens, security interests, claims, restrictions or encumbrances of any kind except such as (A) are described in the Registration Statement, the General Disclosure Package and the Prospectus or (B) would not, singly or in the aggregate, if title were so encumbered, reasonably be expected to result in a Material Adverse Effect; and all of the leases and subleases material to the business of the Company and its subsidiaries, considered as one enterprise, and under which the Company or any of its subsidiaries holds properties described in the Registration Statement, the General Disclosure Package or the Prospectus, are in full force and effect, and neither the Company nor any such subsidiary has received any written notice of any material claim of any sort that has been asserted by anyone adverse to the rights of the Company or any subsidiary under any of the leases or subleases mentioned above, or affecting or questioning the rights of the Company or such subsidiary to the continued possession of the leased or subleased premises under any such lease or sublease.

(xxiii) Possession of Intellectual Property. The Company and its subsidiaries own or possess, or can acquire on reasonable terms, adequate patents, patent rights, licenses, inventions, copyrights, know-how (including trade secrets and other unpatented and/or unpatentable

proprietary or confidential information, systems or procedures), trademarks, service marks, trade names or other intellectual property (collectively, "Intellectual Property") necessary for the conduct of their respective businesses now operated by them, and to the knowledge of the Company, neither the Company nor any of its subsidiaries has received any notice of, or is otherwise aware of, any infringement of or conflict with asserted rights of others with respect to any Intellectual Property or of any facts or circumstances which would render any Intellectual Property owned by or licensed to the Company invalid, unenforceable or inadequate to protect the interest of the Company and its subsidiaries therein, and which infringement or conflict (if the subject of any unfavorable decision, ruling or finding) or invalidity or unenforceability or inadequacy, individually or in the aggregate, would reasonably be expected to result in a Material Adverse Effect. There is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim asserting that the Company or any of its subsidiaries has infringed, misappropriated or otherwise violated any Intellectual Property of any third party in any material respect and, except as disclosed in the Registration Statement, the General Disclosure Package and the Prospectus, no officer of the Company is aware of any facts that would form a reasonable basis for any such action, suit, proceeding or claim. To the Company's knowledge, no third party has any ownership right in or to any Intellectual Property of the Company, other than as disclosed in the Registration Statement, the General Disclosure Package and the Prospectus, except for customary reversionary rights of third-party licensors with respect to the Intellectual Property that is disclosed in the most recent Preliminary Prospectus and the Prospectus as exclusively licensed to the Company or its subsidiaries. To the knowledge of the Company, all patents and patent applications that are owned by or licensed to the Company have been duly and properly filed and maintained. To the knowledge of the Company, the parties prosecuting such patent applications have complied with their duty of candor and disclosure to the U.S. Patent and Trademark Office in connection with such applications, and the Company is not aware of any facts required to be disclosed to such office that were not disclosed to such office and, as such, would preclude the grant of a patent in connection with any such application.

(xxiv) Environmental Laws. Except as described in the Registration Statement, the General Disclosure Package and the Prospectus or would not, singly or in the aggregate, reasonably be expected to result in a Material Adverse Effect, (A) neither the Company nor any of its subsidiaries is in violation of any applicable federal, state, local or foreign statute, law, rule, regulation, ordinance, code, policy or rule of common law or any judicial or administrative interpretation thereof, including any judicial or administrative order, consent, decree or judgment, relating to pollution or protection of human health, the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata) or wildlife, including, without limitation, laws and regulations relating to the release or threatened release of hazardous chemicals, pollutants, contaminants, hazardous wastes, toxic substances, hazardous substances, petroleum or petroleum products, asbestos-containing materials or toxic mold (collectively, "Hazardous Materials") or to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials (collectively, "Environmental Laws"), (B) the Company and its subsidiaries have all permits, authorizations and approvals required under any applicable Environmental Laws for the operation of their business or the occupancy of their real property and are each in compliance with their requirements, (C) there are no pending or, to the Company's knowledge, threatened administrative, regulatory or judicial actions, suits, demands, demand letters, claims, liens, notices of noncompliance or violation, investigations or proceedings relating to any Environmental Law against the Company or any of its subsidiaries and (D) to the Company's knowledge, there are no events or circumstances that would reasonably be expected to form the basis of an order for clean-up or remediation, or an action, suit or proceeding by any private party or Governmental Entity, against or affecting the Company or any of its subsidiaries relating to Hazardous Materials or any Environmental Laws.

(xxv) Accounting Controls. The Company and each of its subsidiaries maintain a system of internal control over financial reporting (as defined under Rule 13a-15 and 15d-15 under the Regulations of the Securities Exchange Act of 1934, as amended (the "1934 Act")) and a system of internal accounting controls designed to provide reasonable assurances that (A) transactions are executed in accordance with management's general or specific authorization; (B) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain accountability for assets; (C) access to assets is permitted only in accordance with management's general or specific authorization; and (D) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Except as described in the Registration Statement, the General Disclosure Package and the Prospectus, since the end of the Company's most recent audited fiscal year, there has been (1) no material weakness in the Company's internal control over financial reporting (whether or not remediated) and (2) no change in the Company's internal control over financial reporting that has materially and adversely affected, or is reasonably likely to materially and adversely affect, the Company's internal control over financial reporting.

(xxvi) Compliance with the Sarbanes-Oxley Act. The Company has taken all necessary actions to ensure that, upon the effectiveness of the Registration Statement, it will be in compliance in all material respects with all provisions of the Sarbanes-Oxley Act of 2002 and all rules and regulations promulgated thereunder or implementing the provisions thereof (the "Sarbanes-Oxley Act") that are then in effect and with which the Company is required to comply as of the effectiveness of the Registration Statement, and is actively, or will be, taking steps to enable it to be in compliance in all material respects with other provisions of the Sarbanes-Oxley Act not currently in effect, upon the effectiveness of such provisions, or which will become applicable to the Company at all times after the effectiveness of the Registration Statement.

(xxvii) Payment of Taxes. All United States federal income tax returns of the Company and its subsidiaries required by law to be filed have been filed and all taxes shown by such returns or otherwise assessed, which are due and payable, have been paid, except assessments against which appeals have been or will be promptly taken and as to which adequate reserves have been provided. The United States federal income tax returns of the Company through the fiscal year ended December 31, 201[3] have been settled and no assessment in connection therewith has been made against the Company. The Company and its subsidiaries have filed all other tax returns that are required to have been filed by them through the date hereof or have timely requested extensions thereof pursuant to applicable foreign, state, local or other law except insofar as the failure to file such returns would not reasonably be expected to result in a Material Adverse Effect, and has paid all taxes due pursuant to such returns or pursuant to any assessment received by the Company and its subsidiaries, except for such taxes, if any, as are being contested in good faith and as to which adequate reserves have been established by the Company and except where the failure to pay such taxes would not reasonably be expected to result in a Material Adverse Effect. The charges, accruals and reserves on the books of the Company in respect of any income and corporation tax liability for any years not finally determined are adequate to meet any assessments or re-assessments for additional income tax for any years not finally determined, except to the extent of any inadequacy that would not reasonably be expected to result in a Material Adverse Effect.

(xxviii) Insurance. The Company and its subsidiaries carry or are entitled to the benefits of insurance, with financially sound and reputable insurers, in such amounts and covering such risks as is generally maintained by companies of established repute and comparable size engaged in the same or similar business, and all such insurance is in full force and effect. The Company has no reason to believe that it or any of its subsidiaries will not be able (A) to renew its existing insurance coverage as and when such policies expire or (B) to obtain comparable coverage from similar institutions as may be necessary or appropriate to conduct its business as now conducted and at a cost that would not reasonably be expected to result in a Material Adverse Effect. Neither of the Company nor any of its subsidiaries has been denied any insurance coverage which it has sought or for which it has applied.

(xxix) Investment Company Act. The Company is not required, and upon the issuance and sale of the Securities as herein contemplated and the application of the net proceeds therefrom as described in the Registration Statement, the General Disclosure Package and the Prospectus will not be required, to register as an "investment company" under the Investment Company Act of 1940, as amended (the "1940 Act").

(xxx) Absence of Manipulation. Neither the Company nor any controlled affiliate of the Company has taken, nor will the Company or any controlled affiliate take, directly or indirectly, any action which is designed, or would reasonably be expected, to cause or result in, or which constitutes, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities or to result in a violation of Regulation M under the 1934 Act.

(xxxi) Foreign Corrupt Practices Act. None of the Company, any of its subsidiaries or, to the knowledge of the Company, any director, officer, agent, employee, controlled affiliate or other person acting on behalf of the Company or any of its subsidiaries is aware of or has taken any action, directly or indirectly, that would result in a violation by such persons of the Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (the "FCPA"), including, without limitation, making use of the mails or any means or instrumentality of interstate commerce corruptly in furtherance of an offer, payment, promise to pay or authorization of the payment of any money, or other property, gift, promise to give, or authorization of the giving of anything of value to any "foreign official" (as such term is defined in the FCPA) or any foreign political party or official thereof or any candidate for foreign political office, in contravention of the FCPA and the Company and, to the knowledge of the Company, its controlled affiliates have conducted their businesses in compliance with the FCPA and have instituted and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

(xxxii) Money Laundering Laws. The operations of the Company and its subsidiaries are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any Governmental Entity (collectively, the "Money Laundering Laws"); and no action, suit or proceeding by or before any Governmental Entity involving the Company or any of its subsidiaries with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(xxxiii) OFAC. None of the Company, any of its subsidiaries or, to the knowledge of the Company, any director, officer, agent, employee, controlled affiliate or representative of the

Company or any of its subsidiaries is an individual or entity ("Person") currently the subject or target of any sanctions administered or enforced by the United States Government, including, without limitation, the U.S. Department of the Treasury's Office of Foreign Assets Control ("OFAC"), the United Nations Security Council ("UNSC"), the European Union, Her Majesty's Treasury ("HMT"), or other relevant sanctions authority (collectively, "Sanctions"), nor is the Company located, organized or resident in a country or territory that is the subject of Sanctions; and the Company will not directly or indirectly use the proceeds of the sale of the Securities, or lend, contribute or otherwise make available such proceeds to any subsidiaries, joint venture partners or other Person, to fund any activities of or business with any Person, or in any country or territory, that, at the time of such funding, is the subject of Sanctions or in any other manner that will result in a violation by any Person (including any Person participating in the transaction, whether as underwriter, advisor, investor or otherwise) of Sanctions.

(xxxiv) Sales of Reserved Securities. In connection with any offer and sale of Reserved Securities outside the United States, each preliminary prospectus, the Prospectus, any prospectus wrapper and any amendment or supplement thereto, at the time it was delivered to Invitees, complied and will comply in all material respects with any applicable laws or regulations of foreign jurisdictions in which the same is distributed. The Company has not offered, or caused the Representatives to offer, Reserved Securities to any person with the specific intent to unlawfully influence (i) a customer or supplier of the Company or any of its affiliates to alter the customer's or supplier's level or type of business with any such entity or (ii) a trade journalist or publication to write or publish favorable information about the Company or any of its affiliates, or their respective businesses or products.

(xxxv) Lending Relationship. Except as disclosed in the Registration Statement, the General Disclosure Package and the Prospectus, the Company (i) does not have any material lending or other relationship with any bank or lending affiliate of any Underwriter and (ii) does not intend to use any of the proceeds from the sale of the Securities to repay any outstanding debt owed to any affiliate of any Underwriter.

(xxxvi) Statistical and Market-Related Data. Any statistical and market-related data included in the Registration Statement, the General Disclosure Package or the Prospectus are based on or derived from sources that the Company believes, after reasonable inquiry, to be reliable and accurate in all material respects and, to the extent required, the Company has obtained the written consent to the use of such data from such sources.

(xxxvii) Clinical Trials. The clinical trials and preclinical studies conducted by or, to the knowledge of the Company after due inquiry, on behalf of or sponsored by the Company or its subsidiaries, or in which the Company or its subsidiaries have participated, that are described in the Registration Statement, the General Disclosure Package and the Prospectus, or the results of which are referred to in the Registration Statement, the General Disclosure Package and the Prospectus, as applicable, were, and if still pending are, being conducted in all material respects in accordance with all applicable rules and regulations of the FDA and comparable drug regulatory agencies outside of the United States to which they are subject (collectively, the "Regulatory Authorities") and current Good Clinical Practices and Good Laboratory Practices; the descriptions of the results of the clinical trials and preclinical studies conducted on the Company's product candidates or conducted by or, to the knowledge of the Company, on behalf of or sponsored by the Company or its subsidiaries contained in the Registration Statement, the General Disclosure Package or the Prospectus are accurate and complete in all material respects and fairly present the data derived from such trials and studies; the Company has no knowledge of any other trials not described in the Registration Statement, the General Disclosure Package

and the Prospectus, the results of which are inconsistent with or call into question the results described or referred to in the Registration Statement, the General Disclosure Package and the Prospectus; the Company and its subsidiaries have operated at all times and are currently in compliance in all material respects with all Applicable Laws of the Regulatory Authorities; neither the Company nor any of its subsidiaries have received any written notices, correspondence or other communications from the Regulatory Authorities or any other governmental agency requiring or threatening the termination, material modification or suspension of any clinical trials or preclinical studies that are described in the Registration Statement, the General Disclosure Package and the Prospectus or the results of which are referred to in the Registration Statement, the General Disclosure Package and the Prospectus, other than ordinary course communications with respect to modifications in connection with the design and implementation of such trials, and, to the Company's knowledge, there are no reasonable grounds for the same.

(xxxviii) Regulatory Filings. The Company has not failed to file with the Regulatory Authorities any required filing, declaration, listing, registration, report or submission with respect to the Company's product candidates that are described or referred to in the Registration Statement, the General Disclosure Package and the Prospectus; all such filings, declarations, listings, registrations, reports or submissions were in material compliance with applicable laws when filed; and no deficiencies regarding compliance with applicable law have been asserted by any applicable regulatory authority with respect to any such filings, declarations, listings, registrations, reports or submissions.

(b) *Officer's Certificates*. Any certificate signed by any officer of the Company or any of its subsidiaries delivered to the Representatives or to counsel for the Underwriters shall be deemed a representation and warranty by the Company (and not by such officer in his or her personal capacity) to each Underwriter as to the matters covered thereby.

SECTION 2. Sale and Delivery to Underwriters; Closing.

(a) *Initial Securities*. On the basis of the representations and warranties herein contained and subject to the terms and conditions herein set forth, the Company agrees to sell to each Underwriter, severally and not jointly, and each Underwriter, severally and not jointly, agrees to purchase from the Company, at the price per share set forth in Schedule A, that number of Initial Securities set forth in Schedule A opposite the name of such Underwriter, plus any additional number of Initial Securities which such Underwriter may become obligated to purchase pursuant to the provisions of Section 10 hereof, subject, in each case, to such adjustments among the Underwriters as Merrill Lynch in its sole discretion shall make to eliminate any sales or purchases of fractional shares.

(b) *Option Securities*. In addition, on the basis of the representations and warranties herein contained and subject to the terms and conditions herein set forth, the Company hereby grants an option to the Underwriters, severally and not jointly, to purchase up to an additional [—] shares of Common Stock, at the price per share set forth in Schedule A, less an amount per share equal to any dividends or distributions declared by the Company and payable on the Initial Securities but not payable on the Option Securities. The option hereby granted may be exercised for 30 days after the date hereof and may be exercised in whole or in part at any time from time to time upon notice by the Representatives to the Company setting forth the number of Option Securities as to which the several Underwriters are then exercising the option and the time and date of payment and delivery for such Option Securities. Any such time and date of delivery (a "Date of Delivery") shall be determined by the Representatives, but shall not be later than seven full business days after the exercise of said option, nor in any event prior to the Closing Time. If the option is exercised as to all or any portion of the Option Securities, each of the

Underwriters, acting severally and not jointly, will purchase that proportion of the total number of Option Securities then being purchased which the number of Initial Securities set forth in Schedule A opposite the name of such Underwriter bears to the total number of Initial Securities, subject, in each case, to such adjustments as Merrill Lynch in its sole discretion shall make to eliminate any sales or purchases of fractional shares.

(c) *Payment*. Payment of the purchase price for, and delivery of certificates or security entitlements for, the Initial Securities shall be made at the offices of Latham & Watkins LLP, 140 Scott Drive, Menlo Park, California 94025, or at such other place as shall be agreed upon by the Representatives and the Company, at 9:00 A.M. (New York City time) on the third (fourth, if the pricing occurs after 4:30 P.M. (New York City time) on any given day) business day after the date hereof (unless postponed in accordance with the provisions of Section 10), or such other time not later than ten business days after such date as shall be agreed upon by the Representatives and the Company (such time and date of payment and delivery being herein called "Closing Time").

In addition, in the event that any or all of the Option Securities are purchased by the Underwriters, payment of the purchase price for, and delivery of certificates or security entitlements for, such Option Securities shall be made at the above-mentioned offices, or at such other place as shall be agreed upon by the Representatives and the Company, on each Date of Delivery as specified in the notice from Merrill Lynch to the Company.

Payment shall be made to the Company by wire transfer of immediately available funds to a bank account designated by the Company against delivery to the Representatives for the respective accounts of the Underwriters of certificates or security entitlements for the Securities to be purchased by them. It is understood that each Underwriter has authorized the Representatives, for its account, to accept delivery of, receipt for, and make payment of the purchase price for, the Initial Securities and the Option Securities, if any, which it has agreed to purchase. Merrill Lynch, individually and not as representative of the Underwriters, may (but shall not be obligated to) make payment of the purchase price for the Initial Securities or the Option Securities, if any, to be purchased by any Underwriter whose funds have not been received by the Closing Time or the relevant Date of Delivery, as the case may be, but such payment shall not relieve such Underwriter from its obligations hereunder.

SECTION 3. Covenants of the Company. The Company covenants with each Underwriter as follows:

(a) *Compliance with Securities Regulations and Commission Requests*. The Company, subject to Section 3(b), will comply with the requirements of Rule 430A, and will notify the Representatives as soon as practicable, and confirm the notice in writing, (i) when any post-effective amendment to the Registration Statement shall become effective or any amendment or supplement to the Prospectus shall have been filed, (ii) of the receipt of any comments from the Commission, (iii) of any request by the Commission for any amendment to the Registration Statement or any amendment or supplement to the Prospectus or for additional information, (iv) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or any post-effective amendment or of any order preventing or suspending the use of any preliminary prospectus or the Prospectus, or of the suspension of the qualification of the Securities for offering or sale in any jurisdiction, or of the initiation or threatening of any proceedings for any of such purposes or of any examination pursuant to Section 8(d) or 8(e) of the 1933 Act concerning the Registration Statement and (v) if the Company becomes the subject of a proceeding under Section 8A of the 1933 Act in connection with the offering of the Securities. The Company will effect all filings required under Rule 424(b), in the manner and within the time period required by Rule 424(b) (without reliance on Rule 424(b)(8)), and will take such steps as it deems necessary to ascertain promptly whether the form of prospectus transmitted for filing under Rule

424(b) was received for filing by the Commission and, in the event that it was not, it will promptly file such prospectus. The Company will use reasonable best efforts to prevent the issuance of any stop order, prevention or suspension and, if any such order is issued, to obtain the lifting thereof as soon as practicable.

(b) *Continued Compliance with Securities Laws*. The Company will comply with the 1933 Act and the 1933 Act Regulations so as to permit the completion of the distribution of the Securities as contemplated in this Agreement and in the Registration Statement, the General Disclosure Package and the Prospectus. If at any time when a prospectus relating to the Securities is (or, but for the exception afforded by Rule 172 of the 1933 Act Regulations ("Rule 172"), would be) required by the 1933 Act to be delivered in connection with sales of the Securities, any event shall occur or condition shall exist as a result of which it is necessary, in the opinion of counsel for the Underwriters or for the Company, to (i) amend the Registration Statement in order that the Registration Statement will not include an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading, (ii) amend or supplement the General Disclosure Package or the Prospectus in order that the General Disclosure Package or the Prospectus, as the case may be, will not include any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein not misleading in the light of the circumstances existing at the time it is delivered to a purchaser or (iii) amend the Registration Statement or amend or supplement the General Disclosure Package or the Prospectus, as the case may be, in order to comply with the requirements of the 1933 Act or the 1933 Act Regulations, the Company will promptly (A) give the Representatives notice of such event, (B) prepare any amendment or supplement as may be necessary to correct such statement or omission or to make the Registration Statement, the General Disclosure Package or the Prospectus comply with such requirements and, a reasonable amount of time prior to any proposed filing or use, furnish the Representatives with copies of any such amendment or supplement and (C) file with the Commission any such amendment or supplement; provided that the Company shall not file or use any such amendment or supplement to which the Representatives or counsel for the Underwriters shall reasonably object. The Company will furnish to the Underwriters such number of copies of such amendment or supplement as the Underwriters may reasonably request.

(c) *Delivery of Registration Statements*. If requested in writing, the Company will deliver to the Representatives and counsel for the Underwriters, without charge, signed copies of the Registration Statement as originally filed and each amendment thereto (including exhibits filed therewith) and, if requested in writing, signed copies of all consents and certificates of experts, and, if requested in writing, will also deliver to the Representatives, without charge, a conformed copy of the Registration Statement as originally filed and each amendment thereto (without exhibits) for each of the Underwriters. The copies of the Registration Statement and each amendment thereto furnished to the Underwriters will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

(d) *Delivery of Prospectuses*. The Company has delivered to each Underwriter, without charge, as many copies of each preliminary prospectus as such Underwriter reasonably requested, and the Company hereby consents to the use of such copies for purposes permitted by the 1933 Act. The Company will furnish to each Underwriter, without charge, during the period when a prospectus relating to the Securities is (or, but for the exception afforded by Rule 172, would be) required to be delivered under the 1933 Act, such number of copies of the Prospectus (as amended or supplemented) as such Underwriter may reasonably request. The Prospectus and any amendments or supplements thereto furnished to the Underwriters will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

(e) *Blue Sky Qualifications*. The Company will use its reasonable best efforts, in cooperation with the Underwriters, to qualify the Securities for offering and sale under the applicable securities laws of such states and other jurisdictions (domestic or foreign) as the Representatives may designate and to maintain such qualifications in effect so long as required to complete the distribution of the Securities; provided, however, that the Company shall not be obligated to file any general consent to service of process or to qualify as a foreign corporation or as a dealer in securities in any jurisdiction in which it is not so qualified or to subject itself to taxation in respect of doing business in any jurisdiction in which it is not otherwise so subject.

(f) *Rule 158*. The Company will timely file such reports pursuant to the 1934 Act as are necessary in order to make generally available to its securityholders as soon as practicable an earnings statement for the purposes of, and to provide to the Underwriters the benefits contemplated by, the last paragraph of Section 11(a) of the 1933 Act.

(g) *Use of Proceeds*. The Company will use the net proceeds received by it from the sale of the Securities in the manner specified in the Registration Statement, the General Disclosure Package and the Prospectus under "Use of Proceeds."

(h) *Listing*. The Company will use its reasonable best efforts to effect and maintain the listing of the Common Stock (including the Securities) on the Nasdaq Global Market.

(i) *Restriction on Sale of Securities*. During a period of 180 days from the date of the Prospectus, the Company will not, without the prior written consent of the Representatives, (i) directly or indirectly, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase or otherwise transfer or dispose of any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock or file any registration statement under the 1933 Act with respect to any of the foregoing or (ii) enter into any swap or any other agreement or any transaction that transfers, in whole or in part, directly or indirectly, the economic consequence of ownership of the Common Stock, whether any such swap or transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise. The foregoing sentence shall not apply to (A) the Securities to be sold hereunder, (B) any shares of Common Stock issued by the Company upon the exercise of an option or warrant or the conversion of a security outstanding on the date hereof and referred to in the Registration Statement, the General Disclosure Package and the Prospectus, (C) any shares of Common Stock issued or options to purchase Common Stock granted pursuant to existing employee benefit plans of the Company referred to in the Registration Statement, the General Disclosure Package and the Prospectus, (D) any shares of Common Stock issued pursuant to any non-employee director stock plan or dividend reinvestment plan referred to in the Registration Statement, the General Disclosure Package and the Prospectus, (E) the filing of a registration statement on Form S-8 or any successor form thereto with respect to the registration of securities to be offered under any employee benefit or equity incentive plans of the Company described in the Registration Statement, the General Disclosure Package and the Prospectus, (F) the entry into agreements providing for the issuance by the Company of shares of Common Stock or any security convertible into or exercisable for shares of Common Stock in connection with the acquisition by the Company or any of its subsidiaries of the securities, business, property or other assets of another person or entity pursuant to an employee benefit plan assumed by the Company in connection with such acquisition, and the issuance of any such securities pursuant to any such agreement, and (G) the entry into agreements providing for the issuance of shares of Common Stock or any security convertible into or exercisable for shares of Common Stock in connection with joint ventures, commercial relationships or other strategic transactions, and the issuance of any such securities pursuant to any such agreement; provided that in the case of clauses (F) and (G), the aggregate number of shares of Common Stock that the Company may sell or issue or agree to sell or issue pursuant to clauses (F) and (G) shall not

exceed 5% of the total number of shares of the Common Stock issued and outstanding as of immediately prior to the completion of the transactions contemplated by this Agreement, and provided further that, in the case of clauses (B) through (G), the Company shall cause each recipient of such securities to execute and deliver, on or prior to the issuance of such securities, a lock-up agreement on substantially the same terms as the lock-up agreements described in Section 5(l) hereof to the extent and for the duration that such terms remain in effect at the time of the transfer, and (y) the Company shall authorize its transfer agent to decline to make any transfer of such shares in violation of such lock-up agreements.

(j) If the Representatives, in their sole discretion, agree to release or waive the restrictions set forth in a lock-up agreement described in Section 5(l) hereof for an officer or director of the Company and provide the Company with notice of the impending release or waiver at least three business days before the effective date of the release or waiver, the Company agrees to announce the impending release or waiver by either (A) a press release substantially in the form of Exhibit B hereto through a major news service at least two business days before the effective date of the release or waiver or (B) any other method reasonably acceptable to the Representatives that satisfies the obligations described in FINRA Rule 5131(d)(2).

(k) *Reporting Requirements*. The Company, during the period when a Prospectus relating to the Securities is (or, but for the exception afforded by Rule 172, would be) required to be delivered under the 1933 Act, will file all documents required to be filed with the Commission pursuant to the 1934 Act within the time periods required by the 1934 Act and 1934 Act Regulations. Additionally, the Company shall report the use of proceeds from the issuance of the Shares as may be required under Rule 463 under the 1933 Act.

(l) *Issuer Free Writing Prospectuses*. The Company agrees that, unless it obtains the prior written consent of the Representatives, it will not make any offer relating to the Securities that would constitute an Issuer Free Writing Prospectus or that would otherwise constitute a "free writing prospectus," or a portion thereof, required to be filed by the Company with the Commission or retained by the Company under Rule 433; provided that the Representatives will be deemed to have consented to the Issuer Free Writing Prospectuses listed on Schedule B-2 hereto and any "road show that is a written communication" within the meaning of Rule 433(d)(8)(i) that has been reviewed by the Representatives. The Company represents that it has treated or agrees that it will treat each such free writing prospectus consented to, or deemed consented to, by the Representatives as an "issuer free writing prospectus," as defined in Rule 433, and that it has complied and will comply with the applicable requirements of Rule 433 with respect thereto, including timely filing with the Commission where required, legending and record keeping. If at any time following issuance of an Issuer Free Writing Prospectus prepared or authorized by the Company there occurred or occurs an event or development as a result of which such Issuer Free Writing Prospectus conflicted or would conflict with the information contained in the Registration Statement, any preliminary prospectus or the Prospectus or included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances existing at that subsequent time, not misleading, the Company will promptly notify the Representatives and will promptly amend or supplement, at its own expense, such Issuer Free Writing Prospectus to eliminate or correct such conflict, untrue statement or omission; provided, however, that the Company shall not be required to notify the Representatives of any statements or omissions in an Issuer Free Writing Prospectus prepared or authorized by the Company made in reliance upon and in conformity with information furnished in writing to the Company by an Underwriter through the Representatives expressly for use therein. Each Underwriter represents that it has not made, and agrees that, without the prior consent of the Company, it will not make any offer relating to the Securities that would constitute a "free writing prospectus" required to be filed by the Company with the Commission or retained by the Company under Rule 433; provided that the Company will be deemed to have consented to any "road show" that is a written communication within the meaning of Rule 433(d)(8)(i) that has been reviewed by the Company.

(m) *Compliance with FINRA Rules*. The Company hereby agrees that it will ensure that the Reserved Securities will be restricted as required by FINRA or the FINRA rules from sale, transfer, assignment, pledge or hypothecation for a period of three months following the date of this Agreement. The Underwriters will notify the Company as to which persons will need to be so restricted. At the request of the Underwriters, the Company will direct the transfer agent to place a stop transfer restriction upon such securities for such period of time. Should the Company release, or seek to release, from such restrictions any of the Reserved Securities, the Company agrees to reimburse the Underwriters for any reasonable expenses (including, without limitation, legal expenses) they incur in connection with such release.

(n) *Testing-the-Waters Materials*. If at any time following the distribution of any Written Testing-the-Waters Communication there occurred or occurs an event or development as a result of which such Written Testing-the-Waters Communication prepared or authorized by the Company included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances existing at that subsequent time, not misleading, the Company will promptly notify the Representatives and will promptly amend or supplement, at its own expense, such Written Testing-the-Waters Communication to eliminate or correct such untrue statement or omission; provided, however, that this covenant shall not apply to any statements or omissions in a Written Testing-the-Waters Communication prepared or authorized by the Company made in reliance upon and in conformity with information furnished in writing to the Company by an Underwriter through the Representatives expressly for use therein.

(o) *Emerging Growth Company Status*. The Company will promptly notify the Representatives if the Company ceases to be an Emerging Growth Company at any time prior to the later of (i) completion of the distribution of the Securities within the meaning of the 1933 Act and (ii) completion of the 180-day restricted period referred to in Section 3(i).

SECTION 4. Payment of Expenses.

(a) *Expenses*. The Company will pay or cause to be paid all expenses incident to the performance of its obligations under this Agreement, including (i) the preparation, printing and filing of the Registration Statement (including financial statements and exhibits) as originally filed and each amendment thereto, (ii) the preparation, printing and delivery to the Underwriters of copies of each preliminary prospectus, each Issuer Free Writing Prospectus and the Prospectus and any amendments or supplements thereto and the reasonable costs associated with electronic delivery of any of the foregoing by the Underwriters to investors, in each case, in connection with the offer and sale of the Securities, (iii) the preparation, issuance and delivery of the certificates or security entitlements for the Securities to the Underwriters, including any stock or other transfer taxes and any stamp or other duties payable upon the sale, issuance or delivery of the Securities to the Underwriters, (iv) the fees and disbursements of the Company's counsel, accountants and other advisors, (v) the qualification of the Securities under securities laws in accordance with the provisions of Section 3(e) hereof, including filing fees and the documented fees and disbursements of counsel for the Underwriters in connection therewith and in connection with the preparation of the Blue Sky Survey and any supplement thereto in an amount not to exceed $2,500, (vi) the fees and expenses of any transfer agent or registrar for the Securities, (vii) the costs and expenses of the Company relating to investor presentations on any "road show" undertaken in connection with the marketing of the Securities, including without limitation, expenses associated with the production of road show slides and graphics, documented fees and expenses of any consultants engaged with the prior written consent of the Company in connection with the road show presentations, travel and lodging

expenses of the representatives of the Company (which, for the avoidance of doubt, does not include the Underwriters or their representatives for purposes of this Section 4(a)(vii)) and officers of the Company and any such consultants, and the cost of transportation in connection with the road show; provided, that the cost of any aircraft chartered in connection with the road show shall be paid by the Underwriters, (viii) the filing fees incident to, and the documented fees and disbursements of counsel to the Underwriters in connection with, the review by FINRA of the terms of the sale of the Securities (provided that the Company shall not be required to reimburse or pay more than $35,000 of the reasonable fees of such counsel), (ix) the fees and expenses incurred in connection with the listing of the Securities on the Nasdaq Global Market, (x) the costs and expenses (including, without limitation, any damages or other amounts payable in connection with legal or contractual liability) associated with the reforming of any contracts for sale of the Securities made by the Underwriters caused by a breach of the representation contained in the third sentence of Section 1(a)(ii) and (xi) all reasonable costs and expenses of the Underwriters, including the reasonable fees and disbursements of counsel for the Underwriters, in connection with matters related to the Reserved Securities which are designated by the Company for sale to Invitees.

(b) *Termination of Agreement*. If this Agreement is terminated by the Representatives in accordance with the provisions of Section 5, Section 9(a)(i) or (iii) or Section 10 hereof, the Company shall reimburse the non-defaulting Underwriters for their reasonable and documented out-of-pocket expenses that were actually incurred, including the reasonable and documented fees and disbursements of counsel for the Underwriters. For the avoidance of doubt, in the case of termination by the Underwriters in accordance with the provisions of Section 10 hereof, the Company shall have no obligation to reimburse any defaulting Underwriter pursuant to this Section 4(b).

SECTION 5. Conditions of Underwriters' Obligations. The obligations of the several Underwriters hereunder are subject to the accuracy of the representations and warranties of the Company contained herein or in certificates of any officer of the Company or any of its subsidiaries delivered pursuant to the provisions hereof, to the performance by the Company of its covenants and other obligations hereunder, and to the following further conditions:

(a) *Effectiveness of Registration Statement; Rule 430A Information*. The Registration Statement, including any Rule 462(b) Registration Statement, has become effective and, at the Closing Time, no stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto has been issued under the 1933 Act, no order preventing or suspending the use of any preliminary prospectus or the Prospectus has been issued and no proceedings for any of those purposes have been instituted or are pending or, to the Company's knowledge, contemplated by the Commission; and the Company has complied with each request (if any) from the Commission for additional information. A prospectus containing the Rule 430A Information shall have been filed with the Commission in the manner and within the time frame required by Rule 424(b) without reliance on Rule 424(b)(8) or a post-effective amendment providing such information shall have been filed with, and declared effective by, the Commission in accordance with the requirements of Rule 430A.

(b) *Opinion of Counsel for Company*. At the Closing Time, the Representatives shall have received the favorable opinion, dated the Closing Time, of Cooley LLP, counsel for the Company, in form and substance reasonably satisfactory to counsel for the Underwriters, together with signed or reproduced copies of such letter for each of the other Underwriters.

(c) *Opinions of Intellectual Property Counsel for Company*. At the Closing Time, the Representatives shall have received the favorable opinion, dated the Closing Time, of each of (i) Pepper Hamilton LLP and (ii) Michael Alan Whittaker Intellectual Property Law, each special intellectual property counsel for the Company, in form and substance reasonably satisfactory to counsel for the Underwriters, together with signed or reproduced copies of each such letter for each of the other Underwriters.

(d) *Opinion of Counsel for Underwriters*. At the Closing Time, the Representatives shall have received the favorable opinion, dated the Closing Time, of Latham & Watkins LLP, counsel for the Underwriters, in form and substance agreed upon by such counsel and the Representatives.

(e) *Officers' Certificate*. At the Closing Time, there shall not have been, since the date hereof or since the respective dates as of which information is given in the Registration Statement, the General Disclosure Package or the Prospectus, any Material Adverse Effect, and the Representatives shall have received a certificate of the Chief Executive Officer or the President of the Company and of the chief financial or chief accounting officer of the Company, in their respective capacities as such officers only, dated the Closing Time, to the effect that (i) there has been no such Material Adverse Effect, (ii) the representations and warranties of the Company in this Agreement are true and correct with the same force and effect as though expressly made at and as of the Closing Time, (iii) the Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied at or prior to the Closing Time, and (iv) no stop order suspending the effectiveness of the Registration Statement under the 1933 Act has been issued, no order preventing or suspending the use of any preliminary prospectus or the Prospectus has been issued and no proceedings for any of those purposes have been instituted or are pending or, to their knowledge, contemplated by the Commission.

(f) *Accountant's Comfort Letter*. At the time of the execution of this Agreement, the Representatives shall have received from Deloitte & Touche LLP a letter, dated such date, in form and substance satisfactory to the Representatives, together with signed or reproduced copies of such letter for each of the other Underwriters containing statements and information of the type ordinarily included in accountants' "comfort letters" to underwriters with respect to the financial statements and certain financial information contained in the Registration Statement, the General Disclosure Package and the Prospectus.

(g) *Bring-down Comfort Letter*. At the Closing Time, the Representatives shall have received from Deloitte & Touche LLP a letter, dated as of the Closing Time, to the effect that they reaffirm the statements made in the letter furnished pursuant to subsection (e) of this Section, except that the specified date referred to shall be a date not more than three business days prior to the Closing Time.

(h) *Principal Accounting Officer's Certificate.* At the time of the execution of this Agreement, the Representatives shall have received from the principal accounting officer of the Company a certificate, dated such date, in form and substance satisfactory to the Representatives.

(i) *Bring-down Principal Accounting Officer's Certificate*. At the Closing Time, the Representatives shall have received from the principal accounting officer of the Company a certificate, dated as of the Closing Time, in form and substance satisfactory to the Representatives.

(j) *Approval of Listing*. At the Closing Time, the Securities shall have been approved for listing on the Nasdaq Global Market, subject only to official notice of issuance.

(k) *No Objection*. FINRA has confirmed that it has not raised any objection with respect to the fairness and reasonableness of the underwriting terms and arrangements relating to the offering of the Securities.

(l) *Lock-up Agreements*. At the date of this Agreement, the Representatives shall have received an agreement substantially in the form of Exhibit A hereto signed by the persons listed on Schedule C hereto.

(m) *Maintenance of Rating*. Since the execution of this Agreement, there shall not have been any decrease in or withdrawal of the rating of any securities of the Company or any of its subsidiaries by any "nationally recognized statistical rating organization" (as defined in Section 3(a)(62) of the 1934 Act) or any notice given of any intended or potential decrease in or withdrawal of any such rating or of a possible change in any such rating that does not indicate the direction of the possible change.

(n) *Conditions to Purchase of Option Securities*. In the event that the Underwriters exercise their option provided in Section 2(b) hereof to purchase all or any portion of the Option Securities, the representations and warranties of the Company contained herein and the statements in any certificates furnished by the Company and any of its subsidiaries hereunder shall be true and correct as of each Date of Delivery and, at the relevant Date of Delivery, the Representatives shall have received:

(i) Officers' Certificate. A certificate, dated such Date of Delivery, of the President or a Vice President of the Company and of the chief financial or chief accounting officer of the Company confirming that the certificate delivered at the Closing Time pursuant to Section 5(e) hereof remains true and correct as of such Date of Delivery.

(ii) Opinion of Counsel for Company. If requested by the Representatives, the favorable opinion of Cooley LLP, counsel for the Company, together with the favorable opinions of Pepper Hamilton LLP and Michael Alan Whittaker Intellectual Property Law, each special intellectual property counsel for the Company, each in form and substance reasonably satisfactory to counsel for the Underwriters, dated such Date of Delivery, relating to the Option Securities to be purchased on such Date of Delivery and otherwise to the same effect as the opinion required by Section 5(b) hereof.

(iii) Opinion of Counsel for Underwriters. If requested by the Representatives, the favorable opinion of Latham & Watkins LLP, counsel for the Underwriters, dated such Date of Delivery, relating to the Option Securities to be purchased on such Date of Delivery and otherwise to the same effect as the opinion required by Section 5(d) hereof.

(v) Bring-down Comfort Letter. If requested by the Representatives, a letter from Deloitte & Touche LLP, in form and substance satisfactory to the Representatives and dated such Date of Delivery, substantially in the same form and substance as the letter furnished to the Representatives pursuant to Section 5(f) hereof, except that the "specified date" in the letter furnished pursuant to this paragraph shall be a date not more than three business days prior to such Date of Delivery.

(vi) Bring-down Principal Accounting Officer's Certificate. If requested by the Representatives, a certificate from the principal accounting officer of the Company, in form and substance satisfactory to the Representatives and dated such Date of Delivery, substantially in the same form and substance as the letter furnished to the Representatives pursuant to Section 5(h) hereof.

(o) *Additional Documents*. At the Closing Time and at each Date of Delivery (if any) counsel for the Underwriters shall have been furnished with such customary documents and opinions as they may reasonably require for the purpose of enabling them to pass upon the issuance and sale of the Securities as herein contemplated, or in order to evidence the accuracy of any of the representations or

warranties, or the fulfillment of any of the conditions, herein contained; and all customary proceedings taken by the Company in connection with the issuance and sale of the Securities as herein contemplated shall be reasonably satisfactory in form and substance to the Representatives and counsel for the Underwriters.

(p) *Termination of Agreement*. If any condition specified in this Section shall not have been fulfilled when and as required to be fulfilled, this Agreement, or, in the case of any condition to the purchase of Option Securities on a Date of Delivery which is after the Closing Time, the obligations of the several Underwriters to purchase the relevant Option Securities, may be terminated by the Representatives by written notice to the Company at any time at or prior to Closing Time or such Date of Delivery, as the case may be, and such termination shall be without liability of any party to any other party except as provided in Section 4 and except that Sections 1, 6, 7, 8, 14, 15 and 16 shall survive any such termination and remain in full force and effect.

SECTION 6. Indemnification.

(a) *Indemnification of Underwriters*. The Company agrees to indemnify and hold harmless each Underwriter, its affiliates (as such term is defined in Rule 501(b) under the 1933 Act (each, an "Affiliate")), its selling agents and each person, if any, who controls any Underwriter within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act as follows:

(i) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, arising out of any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement (or any amendment thereto), including the Rule 430A Information, or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein not misleading or arising out of any untrue statement or alleged untrue statement of a material fact included (A) in any preliminary prospectus, any Issuer Free Writing Prospectus prepared or authorized by the Company, any Written Testing-the-Waters Communication prepared or authorized by the Company, the General Disclosure Package or the Prospectus (or any amendment or supplement thereto), or (B) in any materials or information provided to investors by, or with the approval of, the Company in connection with the marketing of the offering of the Securities ("Marketing Materials"), including any roadshow or investor presentations made to investors by the Company (whether in person or electronically), or the omission or alleged omission in any preliminary prospectus, Issuer Free Writing Prospectus prepared or authorized by the Company, any Written Testing-the-Waters Communication prepared or authorized by the Company, Prospectus or in any Marketing Materials of a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading;

(ii) against any and all loss, liability, claim, damage and expense whatsoever, as incurred, to the extent of the aggregate amount paid in settlement of any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or of any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission; provided that (subject to Section 6(d) below) any such settlement is effected with the written consent of the Company;

(iii) against any and all expense whatsoever, as incurred (including the fees and disbursements of counsel chosen by Merrill Lynch), reasonably incurred in investigating, preparing or defending against any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or any claim whatsoever based upon any such untrue statement or omission, or any such alleged untrue statement or omission, to the extent that any such expense is not paid under (i) or (ii) above;

provided, however, that this indemnity agreement shall not apply to any loss, liability, claim, damage or expense to the extent arising out of any untrue statement or omission or alleged untrue statement or omission made in the Registration Statement (or any amendment thereto), including the Rule 430A Information, the General Disclosure Package, any preliminary prospectus, Issuer Free Writing Prospectus, Written Testing-the-Waters Communication or the Prospectus (or any amendment or supplement thereto) or in any Marketing Materials in reliance upon and in conformity with the Underwriter Information.

(b) *Indemnification of Company, Directors and Officers*. Each Underwriter severally agrees to indemnify and hold harmless the Company, its directors, each of its officers who signed the Registration Statement, and each person, if any, who controls the Company within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act, against any and all loss, liability, claim, damage and expense described in the indemnity contained in subsection (a) of this Section, as incurred, but only with respect to untrue statements or omissions, or alleged untrue statements or omissions, made in the Registration Statement (or any amendment thereto), including the Rule 430A Information, any preliminary prospectus, Issuer Free Writing Prospectus, Written Testing-the-Waters Communication, the General Disclosure Package or the Prospectus (or any amendment or supplement thereto) or in any Marketing Materials in reliance upon and in conformity with the Underwriter Information.

(c) *Actions against Parties; Notification*. Each indemnified party shall give notice as promptly as reasonably practicable to each indemnifying party of any action commenced against it in respect of which indemnity may be sought hereunder, but failure to so notify an indemnifying party shall not relieve such indemnifying party from any liability hereunder to the extent it is not materially prejudiced (through the forfeiture of substantive rights or defenses) as a result thereof and in any event shall not relieve it from any liability which it may have otherwise than on account of this indemnity agreement. In the case of parties indemnified pursuant to Section 6(a) above, counsel to the indemnified parties shall be selected by Merrill Lynch, and, in the case of parties indemnified pursuant to Section 6(b) above, counsel to the indemnified parties shall be selected by the Company. An indemnifying party may participate at its own expense in the defense of any such action and assume the defense thereof, with counsel reasonably satisfactory to such indemnified party; provided, however, that counsel to the indemnifying party (which shall be reasonably satisfactory to such indemnified party) shall not (except with the consent of the indemnified party) also be counsel to the indemnified party. In no event shall the indemnifying parties be liable for fees and expenses of more than one counsel (in addition to any local counsel) separate from their own counsel for all indemnified parties in connection with any one action or separate but similar or related actions in the same jurisdiction arising out of the same general allegations or circumstances. No indemnifying party shall, without the prior written consent of the indemnified parties, settle or compromise or consent to the entry of any judgment with respect to any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or any claim whatsoever in respect of which indemnification or contribution could be sought under this Section 6 or Section 7 hereof (whether or not the indemnified parties are actual or potential parties thereto), unless such settlement, compromise or consent (i) includes an unconditional release of each indemnified party from all liability arising out of such litigation, investigation, proceeding or claim and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party.

(d) *Settlement without Consent if Failure to Reimburse*. If at any time an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for fees and expenses of counsel, such indemnifying party agrees that it shall be liable for any settlement of the nature contemplated by Section 6(a)(ii) or settlement of any claim in connection with any violation referred to in

Section 6(e) effected without its written consent if (i) such settlement is entered into more than 45 days after receipt by such indemnifying party of the aforesaid request, (ii) such indemnifying party shall have received notice of the terms of such settlement at least 30 days prior to such settlement being entered into and (iii) such indemnifying party shall not have reimbursed such indemnified party in accordance with such request prior to the date of such settlement.

(e) *Indemnification for Reserved Securities*. In connection with the offer and sale of the Reserved Securities, the Company agrees to indemnify and hold harmless the Underwriters, their Affiliates and selling agents and each person, if any, who controls any Underwriter within the meaning of either Section 15 of the 1933 Act or Section 20 of the 1934 Act, from and against any and all loss, liability, claim, damage and expense (including, without limitation, any legal or other expenses reasonably incurred in connection with defending, investigating or settling any such action or claim), as incurred, (i) arising out of the violation of any applicable laws or regulations of foreign jurisdictions where Reserved Securities have been offered, (ii) arising out of any untrue statement or alleged untrue statement of a material fact contained in any prospectus wrapper or other material prepared by or with the consent of the Company for distribution to Invitees in connection with the offering of the Reserved Securities or caused by any omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, (iii) caused by the failure of any Invitee to pay for and accept delivery of Reserved Securities which have been orally confirmed for purchase by any Invitee by 8:00 A.M. (New York City time) on the first business day after the date of the Agreement or (iv) related to, or arising out of or in connection with, the offering of the Reserved Securities; provided, however, that this indemnity agreement shall not apply to any loss, liability, claim, damage or expense to the extent arising out of any untrue statement or omission or alleged untrue statement or omission made in the Registration Statement (or any amendment thereto), including the Rule 430A Information, the General Disclosure Package, any preliminary prospectus, Issuer Free Writing Prospectus, Written Testing-the-Waters Communication or the Prospectus (or any amendment or supplement thereto) or in any Marketing Materials in reliance upon and in conformity with the Underwriter Information.

SECTION 7. Contribution. If the indemnification provided for in Section 6 hereof is for any reason unavailable to or insufficient to hold harmless an indemnified party in respect of any losses, liabilities, claims, damages or expenses referred to therein, then each indemnifying party shall contribute to the aggregate amount of such losses, liabilities, claims, damages and expenses reasonably incurred by such indemnified party, as incurred, (i) in such proportion as is appropriate to reflect the relative benefits received by the Company, on the one hand, and the Underwriters, on the other hand, from the offering of the Securities pursuant to this Agreement or (ii) if the allocation provided by clause (i) is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company, on the one hand, and of the Underwriters, on the other hand, in connection with the statements or omissions, or in connection with any violation of the nature referred to in Section 6(e) hereof, which resulted in such losses, liabilities, claims, damages or expenses, as well as any other relevant equitable considerations.

The relative benefits received by the Company, on the one hand, and the Underwriters, on the other hand, in connection with the offering of the Securities pursuant to this Agreement shall be deemed to be in the same respective proportions as the total net proceeds from the offering of the Securities pursuant to this Agreement (before deducting expenses) received by the Company, on the one hand, and the total underwriting discount received by the Underwriters, on the other hand, in each case as set forth on the cover of the Prospectus, bear to the aggregate initial public offering price of the Securities as set forth on the cover of the Prospectus.

The relative fault of the Company, on the one hand, and the Underwriters, on the other hand, shall be determined by reference to, among other things, whether any such untrue or alleged untrue statement of a material fact or omission or alleged omission to state a material fact relates to information supplied by the Company or by the Underwriters and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission or any violation of the nature referred to in Section 6(e) hereof.

The Company and the Underwriters agree that it would not be just and equitable if contribution pursuant to this Section 7 were determined by pro rata allocation (even if the Underwriters were treated as one entity for such purpose) or by any other method of allocation which does not take account of the equitable considerations referred to above in this Section 7. The aggregate amount of losses, liabilities, claims, damages and expenses incurred by an indemnified party and referred to above in this Section 7 shall be deemed to include any documented legal or other expenses reasonably incurred by such indemnified party in investigating, preparing or defending against any litigation, or any investigation or proceeding by any governmental agency or body, commenced or threatened, or any claim whatsoever based upon any such untrue or alleged untrue statement or omission or alleged omission.

Notwithstanding the provisions of this Section 7, no Underwriter shall be required to contribute any amount in excess of the underwriting commissions received by such Underwriter in connection with the Shares underwritten by it and distributed to the public.

No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the 1933 Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation.

For purposes of this Section 7, each person, if any, who controls an Underwriter within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act and each Underwriter's Affiliates and selling agents shall have the same rights to contribution as such Underwriter, and each director of the Company, each officer of the Company who signed the Registration Statement, and each person, if any, who controls the Company within the meaning of Section 15 of the 1933 Act or Section 20 of the 1934 Act shall have the same rights to contribution as the Company. The Underwriters' respective obligations to contribute pursuant to this Section 7 are several in proportion to the number of Initial Securities set forth opposite their respective names in Schedule A hereto and not joint.

SECTION 8. Representations, Warranties and Agreements to Survive. All representations, warranties and agreements contained in this Agreement or in certificates of officers of the Company or any of its subsidiaries submitted pursuant hereto, shall remain operative and in full force and effect regardless of (i) any investigation made by or on behalf of any Underwriter or its Affiliates or selling agents, any person controlling any Underwriter, its officers or directors or any person controlling the Company and (ii) delivery of and payment for the Securities.

SECTION 9. Termination of Agreement.

(a) *Termination*. The Representatives may terminate this Agreement, by notice to the Company, at any time at or prior to the Closing Time (i) if there has been, in the judgment of the Representatives, since the time of execution of this Agreement or since the respective dates as of which information is given in the Registration Statement, the General Disclosure Package or the Prospectus, any Material Adverse Effect, or (ii) if there has occurred any material adverse change in the financial markets in the United States or the international financial markets, any outbreak of hostilities or escalation thereof or other calamity or crisis or any change or development involving a prospective change in national or international political, financial or economic conditions, in each case the effect of which is such as to

make it, in the judgment of the Representatives, impracticable or inadvisable to proceed with the completion of the offering or to enforce contracts for the sale of the Securities, or (iii) if trading in any securities of the Company has been suspended or materially limited by the Commission or the Nasdaq Global Market, or (iv) if trading generally on the NYSE MKT or the New York Stock Exchange or in the Nasdaq Global Market has been suspended or materially limited, or minimum or maximum prices for trading have been fixed, or maximum ranges for prices have been required, by any of said exchanges or by order of the Commission, FINRA or any other governmental authority, or (v) a material disruption has occurred in commercial banking or securities settlement or clearance services in the United States, or (vi) if a banking moratorium has been declared by either Federal or New York authorities.

(b) *Liabilities*. If this Agreement is terminated pursuant to this Section, such termination shall be without liability of any party to any other party except as provided in Section 4 hereof, and provided further that Sections 1, 6, 7, 8, 14, 15 and 16 shall survive such termination and remain in full force and effect.

SECTION 10. Default by One or More of the Underwriters. If one or more of the Underwriters shall fail at the Closing Time or a Date of Delivery to purchase the Securities which it or they are obligated to purchase under this Agreement (the "Defaulted Securities"), the Representatives shall have the right, within 24 hours thereafter, to make arrangements for one or more of the non-defaulting Underwriters, or any other underwriters, to purchase all, but not less than all, of the Defaulted Securities in such amounts as may be agreed upon and upon the terms herein set forth; if, however, the Representatives shall not have completed such arrangements within such 24-hour period, then:

(i) if the number of Defaulted Securities does not exceed 10% of the number of Securities to be purchased on such date, each of the non-defaulting Underwriters shall be obligated, severally and not jointly, to purchase the full amount thereof in the proportions that their respective underwriting obligations hereunder bear to the underwriting obligations of all non-defaulting Underwriters, or

(ii) if the number of Defaulted Securities exceeds 10% of the number of Securities to be purchased on such date, this Agreement or, with respect to any Date of Delivery which occurs after the Closing Time, the obligation of the Underwriters to purchase, and the Company to sell, the Option Securities to be purchased and sold on such Date of Delivery shall terminate without liability on the part of any non-defaulting Underwriter.

No action taken pursuant to this Section shall relieve any defaulting Underwriter from liability in respect of its default.

Any termination of this Agreement pursuant to this Section 10 shall be without liability on the part of the Company except to the extent set forth in Section 4(b); provided that Sections 1, 6, 7, 8, 14, 15 and 16 shall survive such termination and remain in full force and effect.

In the event of any such default which does not result in a termination of this Agreement or, in the case of a Date of Delivery which is after the Closing Time, which does not result in a termination of the obligation of the Underwriters to purchase and the Company to sell the relevant Option Securities, as the case may be, either the (i) Representatives or (ii) the Company shall have the right to postpone Closing Time or the relevant Date of Delivery, as the case may be, for a period not exceeding seven days in order to effect any required changes in the Registration Statement, the General Disclosure Package or the Prospectus or in any other documents or arrangements. As used herein, the term "Underwriter" includes any person substituted for an Underwriter under this Section 10.

SECTION 11. Notices. All notices and other communications hereunder shall be in writing and shall be deemed to have been duly given if mailed or transmitted by any standard form of telecommunication. Notices to the Underwriters shall be directed to Merrill Lynch at One Bryant Park, New York, New York 10036, attention of Syndicate Department (facsimile: (646) 855-3073), with a copy to ECM Legal (facsimile: (212) 230-8730); notices to the Company shall be directed to it at Aduro Biotech, Inc., 626 Bancroft Way, Berkeley, California 94710, attention Chief Executive Officer.

SECTION 12. No Advisory or Fiduciary Relationship. The Company acknowledges and agrees that (a) the purchase and sale of the Securities pursuant to this Agreement, including the determination of the initial public offering price of the Securities and any related discounts and commissions, is an arm's-length commercial transaction between the Company, on the one hand, and the several Underwriters, on the other hand, (b) in connection with the offering of the Securities and the process leading thereto, each Underwriter is and has been acting solely as a principal and is not the agent or fiduciary of the Company, any of its subsidiaries or their respective stockholders, creditors, employees or any other party, (c) no Underwriter has assumed or will assume an advisory or fiduciary responsibility in favor of the Company with respect to the offering of the Securities or the process leading thereto (irrespective of whether such Underwriter has advised or is currently advising the Company or any of its subsidiaries on other matters) and no Underwriter has any obligation to the Company with respect to the offering of the Securities except the obligations expressly set forth in this Agreement, (d) the Underwriters and their respective affiliates may be engaged in a broad range of transactions that involve interests that differ from those of the Company and (e) the Underwriters have not provided any legal, accounting, regulatory or tax advice with respect to the offering of the Securities and the Company has consulted its own respective legal, accounting, regulatory and tax advisors to the extent it deemed appropriate.

SECTION 13. Parties. This Agreement shall each inure to the benefit of and be binding upon the Underwriters and the Company and their respective successors. Nothing expressed or mentioned in this Agreement is intended or shall be construed to give any person, firm or corporation, other than the Underwriters and the Company and their respective successors and the controlling persons and officers and directors referred to in Sections 6 and 7 and their heirs and legal representatives, any legal or equitable right, remedy or claim under or in respect of this Agreement or any provision herein contained. This Agreement and all conditions and provisions hereof are intended to be for the sole and exclusive benefit of the Underwriters and the Company and their respective successors, and said controlling persons and officers and directors and their heirs and legal representatives, and for the benefit of no other person, firm or corporation. No purchaser of Securities from any Underwriter shall be deemed to be a successor by reason merely of such purchase.

SECTION 14. Trial by Jury. The Company (on its behalf and, to the extent permitted by applicable law, on behalf of its stockholders and affiliates) and each of the Underwriters hereby irrevocably waives, to the fullest extent permitted by applicable law, any and all right to trial by jury in any legal proceeding arising out of or relating to this Agreement or the transactions contemplated hereby.

SECTION 15. GOVERNING LAW. THIS AGREEMENT AND ANY CLAIM, CONTROVERSY OR DISPUTE ARISING UNDER OR RELATED TO THIS AGREEMENT SHALL BE GOVERNED BY, AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF, THE STATE OF NEW YORK WITHOUT REGARD TO ITS CHOICE OF LAW PROVISIONS.

SECTION 16. Consent to Jurisdiction; Waiver of Immunity. Any legal suit, action or proceeding arising out of or based upon this Agreement or the transactions contemplated hereby ("Related Proceedings") shall be instituted in (i) the federal courts of the United States of America located in the City and County of New York, Borough of Manhattan or (ii) the courts of the State of New York located in the City and County of New York, Borough of Manhattan (collectively, the "Specified Courts"), and

each party irrevocably submits to the exclusive jurisdiction (except for proceedings instituted in regard to the enforcement of a judgment of any such court (a "Related Judgment"), as to which such jurisdiction is non-exclusive) of such courts in any such suit, action or proceeding. Service of any process, summons, notice or document by mail to such party's address set forth above shall be effective service of process for any suit, action or other proceeding brought in any such court. The parties irrevocably and unconditionally waive any objection to the laying of venue of any suit, action or other proceeding in the Specified Courts and irrevocably and unconditionally waive and agree not to plead or claim in any such court that any such suit, action or other proceeding brought in any such court has been brought in an inconvenient forum.

SECTION 17. TIME. TIME SHALL BE OF THE ESSENCE OF THIS AGREEMENT. EXCEPT AS OTHERWISE SET FORTH HEREIN, SPECIFIED TIMES OF DAY REFER TO NEW YORK CITY TIME.

SECTION 18. Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original, but all such counterparts shall together constitute one and the same Agreement.

SECTION 19. Effect of Headings. The Section headings herein are for convenience only and shall not affect the construction hereof.

If the foregoing is in accordance with your understanding of our agreement, please sign and return to the Company a counterpart hereof, whereupon this instrument, along with all counterparts, will become a binding agreement among the Underwriters and the Company in accordance with its terms.

Very truly yours,

ADURO BIOTECH, INC.

By _____
Title:

CONFIRMED AND ACCEPTED,
as of the date first above written:

MERRILL LYNCH, PIERCE, FENNER & SMITH
INCORPORATED
LEERINK PARTNERS LLC

By: MERRILL LYNCH, PIERCE, FENNER & SMITH
INCORPORATED

By _____
Authorized Signatory

By: LEERINK PARTNERS LLC

By _____
Authorized Signatory

For themselves and as Representatives of the other Underwriters named in Schedule A hereto.

SCHEDULE A

The initial public offering price per share for the Securities shall be $[—].

The purchase price per share for the Securities to be paid by the several Underwriters shall be $[—], being an amount equal to the initial public offering price set forth above less $[—] per share, subject to adjustment in accordance with Section 2(b) for dividends or distributions declared by the Company and payable on the Initial Securities but not payable on the Option Securities.

Name of Underwriter	Number of Initial Securities
Merrill Lynch, Pierce, Fenner & Smith Incorporated	
Leerink Partners LLC	
William Blair & Company L.L.C.	
Canaccord Genuity Inc.	
Total	[—]

SCHEDULE B-1

Pricing Terms

1. The Company is selling [—] shares of Common Stock.

2. The Company has granted an option to the Underwriters, severally and not jointly, to purchase up to an additional [—] shares of Common Stock.

3. The initial public offering price per share for the Securities shall be $[—].

SCHEDULE B-2

Free Writing Prospectuses

[—]

SCHEDULE B-3

Written Testing-the-Waters Communications

[—]

SCHEDULE C

List of Persons and Entities Subject to Lock-up

FORM OF LOCK-UP FROM DIRECTORS, OFFICERS OR OTHER STOCKHOLDERS
PURSUANT TO SECTION 5(l)

, 2014

Merrill Lynch, Pierce, Fenner & Smith
Incorporated,
Leerink Partners LLC
as Representatives of the several
Underwriters to be named in the
within-mentioned Underwriting Agreement
c/o Merrill Lynch, Pierce, Fenner & Smith
Incorporated
One Bryant Park
New York, New York 10036

Re: Proposed Public Offering by Aduro Biotech, Inc.

Dear Sirs:

The undersigned, a securityholder, officer and/or director of Aduro Biotech, Inc., a Delaware corporation (the "Company"), understands that Merrill Lynch, Pierce, Fenner & Smith Incorporated ("Merrill Lynch") and Leerink Partners LLC ("Leerink") propose to enter into an Underwriting Agreement (the "Underwriting Agreement") with the Company providing for the public offering ("Public Offering") of shares of the Company's common stock, par value $0.0001 per share (the "Common Stock"). In recognition of the benefit that such an offering will confer upon the undersigned as a securityholder, officer and/or director of the Company, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the undersigned agrees with each underwriter to be named in the Underwriting Agreement that, during the period beginning on the date hereof and ending on the date that is 180 days from the date of the Underwriting Agreement (the "Lock-Up Period"), the undersigned will not, without the prior written consent of Merrill Lynch and Leerink, directly or indirectly, (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase or otherwise transfer or dispose of any shares of the Company's Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock, whether now owned or hereafter acquired by the undersigned or with respect to which the undersigned has or hereafter acquires the power of disposition (collectively, the "Lock-Up Securities"), or exercise any right with respect to the registration of any of the Lock-up Securities, or file or cause to be filed any registration statement in connection therewith, under the Securities Act of 1933, as amended, or (ii) enter into any swap or any other agreement or any transaction that transfers, in whole or in part, directly or indirectly, the economic consequence of ownership of the Lock-Up Securities, whether any such swap or transaction is to be settled by delivery of Common Stock or other securities, in cash or otherwise. If the undersigned is an officer or director of the Company, the undersigned further agrees that the foregoing provisions shall be equally applicable to any issuer-directed Securities the undersigned may purchase in the offering. In addition, the undersigned hereby agrees that the undersigned will not make any demand for or exercise any right with respect to any registration of any shares of Common Stock or any security convertible into or exercisable or exchangeable for shares of Common Stock during the Lock-Up Period.

If the undersigned is an officer or director of the Company, (1) Merrill Lynch and Leerink agree that, at least three business days before the effective date of any release or waiver of the foregoing restrictions in connection with a transfer of shares of the Common Stock, Merrill Lynch and Leerink will notify the Company of the impending release or waiver, and (2) the Company has agreed, or will agree, in the Underwriting Agreement to announce the impending release or waiver by (A) press release through a major news service at least two business days before the effective date of the release or waiver, or (B) any other method reasonably acceptable to Merrill Lynch and Leerink that satisfies the obligations described in FINRA Rule 5131(d)(2). Any release or waiver granted by Merrill Lynch and Leerink hereunder to any such officer or director shall only be effective two business days after the publication date of such press release. The provisions of this paragraph will not apply if (i) the release or waiver is effected solely to permit a transfer not for consideration and (ii) the transferee has agreed in writing to be bound by the same terms described in this letter to the extent and for the duration that such terms remain in effect at the time of the transfer.

Notwithstanding the foregoing, and subject to the conditions below, the undersigned may transfer the Lock-Up Securities without the prior written consent of Merrill Lynch and Leerink:

(a) provided that (1) Merrill Lynch and Leerink receive a signed lock-up agreement for the balance of the lockup period from each donee, trustee, distributee, or transferee, as the case may be, (2) any such transfer shall not involve a disposition for value, (3) such transfers are not required to be reported with the Securities and Exchange Commission on Form 4 in accordance with Section 16 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and (4) the undersigned does not otherwise voluntarily effect any public filing or report regarding such transfers:

  (a) as a *bona fide* gift or gifts or for *bona fide* estate planning purposes; or

  (b) by will or intestate succession upon the death of the undersigned; or

  (c) to any trust or other entity for the direct or indirect benefit of the undersigned or the immediate family of the undersigned (for purposes of this lock-up agreement, "immediate family" shall mean any relationship by blood, marriage or adoption, not more remote than first cousin), or if the undersigned is a trust, to any beneficiary (including such beneficiary's estate) of the undersigned; or

  (d) as a distribution to limited partners, general partners, limited liability company members or stockholders of the undersigned; or

  (e) to the undersigned's affiliates or to any investment fund or other entity controlled or managed by the undersigned;

(b) sell or transfer shares of Common Stock to the underwriters in the Public Offering;

(c) transfer Lock-Up Securities to the Company upon a vesting event of the Company's securities, pursuant to arrangements under which the Company has the option to repurchase such shares or a right of first refusal with respect to transfers of such shares or upon the exercise or conversion of options or warrants to purchase the Company's securities, in each case, on a "cashless" or "net exercise" basis or to cover tax

withholding obligations of the undersigned in connection with such vesting or exercise, provided that (1) any filing under Section 16 of the Exchange Act made during the Lock-Up Period shall clearly indicate in the footnotes thereto that (A) the filing relates to the circumstances described above and (B) no Lock-Up Securities were sold by the reporting person other than such transfers to the Company as described above and (2) the undersigned does not otherwise voluntarily effect any other public filing or report regarding such transfers during the Lock-Up Period;

(d) convert shares of preferred stock of the Company into shares of Common Stock of the Company, provided that any shares of Common Stock received upon such conversion remain subject to the terms of this lock-up agreement;

(e) transfer Lock-Up Securities by operation of law, including pursuant to a domestic order, a negotiated divorce settlement or other court order, provided that Lock-Up Securities received upon such transfer remain subject to the terms of this lock-up agreement; or

(f) transfer Lock-Up Securities pursuant to a *bona fide* third party tender offer, merger, consolidation or other similar transaction made to all holders of Lock-Up Securities involving a change of control of the Company, provided that in the event that the tender offer, merger, consolidation or other such transaction is not completed, the Lock-Up Securities owned by the undersigned shall remain subject to the restrictions contained in this lock-up agreement. "Change of control" shall mean the transfer (whether by tender offer, merger, consolidation or other similar transaction), in one transaction or a series of related transactions, to a person or group of affiliated persons (other than an underwriter pursuant to the Public Offering), of the Company's voting securities if, after such transfer, such person or group of affiliated persons would hold more than 50% of the outstanding voting securities of the Company (or the surviving entity).

Furthermore, the undersigned may sell shares of Common Stock of the Company purchased by the undersigned on the open market following the Public Offering, and, unless the undersigned is a director or officer of the Company, any Securities the undersigned may purchase in the Offering, whether or not issuer directed, if and only if (i) such sales are not required to be reported with the Securities and Exchange Commission on Form 4 in accordance with Section 16 of the Securities Exchange Act during the Lock-Up Period, or otherwise, and (ii) the undersigned does not otherwise voluntarily effect any public filing or report regarding such sales.

In addition, the restrictions on transfer and disposition of the Lock-Up Securities during the Lock-Up Period shall not apply to the repurchase of Lock-Up Securities by the Company in connection with the termination of the undersigned's employment or other service with the Company.

Nothing in this lock-up agreement shall preclude the establishment of a new trading plan meeting the requirements of Rule 10b5-1 under the Exchange Act; provided, that (i) no public report or filing under Section 16 of the Exchange Act shall be required during the Lock-Up Period, (ii) the undersigned does not otherwise voluntarily effect any public filing or report regarding the establishment of such plan during the Lock-Up Period, and (iii) no sales are made during the Lock-Up Period pursuant to such plan.

The undersigned also agrees and consents to the entry of stop transfer instructions with the Company's transfer agent and registrar against the transfer of the Lock-Up Securities except in compliance with the foregoing restrictions. This lock-up agreement shall automatically terminate, and the undersigned shall be released from its obligations hereunder upon the earliest to occur, if any, of (a) June 30, 2015, in the event that the Underwriting Agreement has not been executed by such date (provided,

that the Company may by written notice to the undersigned prior to June 30, 2015 extend such date for a period of up to an additional three months), (b) the date that the registration statement with respect to the public offering is withdrawn by the Company, (c) the date the Company notifies Merrill Lynch and Leerink in writing prior to the date of execution of the Underwriting Agreement that it does not intend to proceed with the Public Offering, or (d) the date the Underwriting Agreement (other than the provisions thereof that survive termination) shall terminate or be terminated prior to payment for and delivery of the shares of Common Stock to be sold thereunder.

Very truly yours,

Signature: _____

Print Name: _____

FORM OF PRESS RELEASE
TO BE ISSUED PURSUANT TO SECTION 3(j)

ADURO BIOTECH, INC.
[Date]

ADURO BIOTECH, INC. (the "Company") announced today that BofA Merrill Lynch and Leerink Partners LLC, the joint book-running managers in the Company's recent public sale of [—] shares of common stock, is [waiving] [releasing] a lock-up restriction with respect to shares of the Company's common stock held by [certain officers or directors] [an officer or director] of the Company. The [waiver] [release] will take effect on , 2015, and the shares may be sold on or after such date.

This press release is not an offer for sale of the securities in the United States or in any other jurisdiction where such offer is prohibited, and such securities may not be offered or sold in the United States absent registration or an exemption from registration under the United States Securities Act of 1933, as amended.

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
ADURO BIOTECH, INC.

Aduro Biotech, Inc. (the "**Corporation**"), a corporation organized and existing under the General Corporation Law of the State of Delaware (the "**General Corporation Law**"), by its duly authorized officer, does hereby certify that:

1. The original name of the Corporation was Aduro BioTech, Inc. and the date of filing of the original Certificate of Incorporation of the Corporation with the Secretary of State of the State of Delaware was May 5, 2011.

2. Pursuant to the applicable provisions of Sections 228, 242 and 245 of the General Corporation Law, this Amended and Restated Certificate of Incorporation was adopted by the Corporation's Board of Directors and stockholders.

FIRST: The name of the Corporation is Aduro Biotech, Inc.

SECOND: The address of the registered office of the Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, Delaware 19801. The name of its registered agent at such address is The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law.

FOURTH: The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 90,000,000 shares of Common Stock, $0.0001 par value per share ("**Common Stock**"), and (ii) 74,438,403 shares of Preferred Stock, $0.0001 par value per share ("**Preferred Stock**"), of which 161,843 have been designated as Series A Preferred Stock (the "**Series A Preferred Stock**"), 3,393,666 have been designated as Series A-1 Preferred Stock (the "**Series A-1 Preferred Stock**"), 21,525,480 have been designated as Series B Preferred Stock (the "**Series B Preferred Stock**"), 25,623,183 have been designated as Series C Preferred Stock (the "**Series C Preferred Stock**"), 19,012,173 have been designated as Series D Preferred Stock (the "**Series D Preferred Stock**"), and 4,722,058 have been designated as Series E Preferred Stock (the "**Series E Preferred Stock**").

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A. COMMON STOCK

1. General. The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein.

2. Voting. The holders of the Common Stock are entitled to one vote for each share of Common Stock held at all meetings of stockholders (and written actions in lieu of meetings); provided, however, that, except as otherwise required by law, holders of Common Stock, as such, shall not be entitled to vote on any amendment to the Amended and Restated Certificate of Incorporation (the "**Certificate of Incorporation**") that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together with the holders of one or more other such series, to vote thereon pursuant to the Certificate of Incorporation or pursuant to the General Corporation Law. There shall be no cumulative voting. The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of one or more series of Preferred Stock that may be required by the terms of the Certificate of Incorporation) the affirmative vote of the holders of shares of capital stock of the Corporation representing a majority of the votes represented by all outstanding shares of capital stock of the Corporation entitled to vote, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law.

B. PREFERRED STOCK

Unless otherwise indicated, references to "Sections" or "Subsections" in this Part B of this Article Fourth refer to sections and subsections of Part B of this Article Fourth.

1. Dividends.

1.1 Senior Preferred. In any calendar year, the holders of outstanding shares of Series B Preferred Stock, Series C Preferred Stock, Series D Preferred Stock and Series E Preferred Stock (collectively, the "**Senior Preferred**") shall be entitled to receive dividends, when, as and if declared by the Board of Directors, out of any assets at the time legally available therefor, at a rate of eight percent (8%) of the Series B Original Issue Price (as defined below), Series C Original Issue Price (as defined below), Series D Original Issue Price (as defined below) or Series E Original Issue Price (as defined below), as the case may be, payable in preference and priority to any declaration or payment of any dividend or distribution on Series A Preferred Stock, Series A-1 Preferred Stock (collectively, the "**Junior Preferred**") and Common Stock of the Corporation in such calendar year. Such dividends shall not accrue and shall not cumulate. The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than dividends on shares of Common Stock payable in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in the Certificate of Incorporation) the holders of the Series B Preferred Stock, Series C Preferred Stock, Series D Preferred Stock and Series E Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of Series B Preferred Stock in an amount at least equal to eight percent (8%) of the Series B Original Issue Price, on each outstanding share of Series C Preferred Stock in an amount at least equal to eight percent (8%) of the Series C Original Issue Price, on each outstanding share of Series D Preferred Stock in an amount at

least equal to eight percent (8%) of the Series D Original Issue Price and on each outstanding share of Series E Preferred Stock in an amount at least equal to eight percent (8%) of the Series E Original Issue Price. The "**Series B Original Issue Price**" shall mean $1.1937322 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock. The "**Series C Original Issue Price**" shall mean $2.17 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series C Preferred Stock. The "**Series D Original Issue Price**" shall mean $2.7029 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series D Preferred Stock. The "**Series E Original Issue Price**" shall mean $10.5886 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series E Preferred Stock.

1.2 Junior Preferred. After payment of all such preferential dividends to the holders of shares of Senior Preferred, the holders of outstanding shares of Junior Preferred shall be entitled to receive dividends, when, as and if declared by the Board of Directors, out of any assets at the time legally available therefor, at a rate of five percent (5%) of the Series A Original Issue Price or Series A-1 Original Issue Price, as the case may be (each, as defined below) payable in preference and priority to any declaration or payment of any dividend or distribution on Common Stock of the Corporation in such calendar year. Such dividends shall not accrue and shall not cumulate. The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than the Senior Preferred as set forth above and dividends on shares of Common Stock payable in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in the Certificate of Incorporation) the holders of the Junior Preferred then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of Junior Preferred in an amount at least equal to five percent (5%) of the Series A Original Issue Price or Series A-1 Original Issue Price, as the case may be. The "**Series A-1 Original Issue Price**" shall mean $1.36 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A-1 Preferred Stock. The "**Series A Original Issue Price**" shall mean $50.00 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A Preferred Stock.

1.3 Other Dividends. After payment of all such preferential dividends to the holders of shares of Senior Preferred and Junior Preferred, any additional dividends paid by the Corporation shall be shared and distributed among the holders of Senior Preferred and Common Stock pro rata based on the number of shares of Common Stock then held by each holder (assuming conversion of all such shares of Senior Preferred into Common Stock), calculated on the record date for determination of holders entitled to receive such dividends.

2. Liquidation, Dissolution or Winding Up; Certain Mergers, Consolidations and Asset Sales.

2.1 Preferential Payments to Holders of Preferred Stock.

2.1.1 In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation (including a Deemed Liquidation Event, as defined below), the holders of shares of Senior Preferred then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders before any payment shall be made to the holders of Junior Preferred or Common Stock by reason of their ownership thereof, an amount per share equal to the Series B Original Issue Price, Series C Original Issue Price, Series D Original Issue Price or Series E Original Issue Price, as the case may be, plus any dividends declared but unpaid thereon. If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Senior Preferred the full amount to which they shall be entitled under this Subsection 2.1.1, the holders of shares of Senior Preferred shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.1.2 In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation (including a Deemed Liquidation Event), after the payment in full of all preferential amounts required to be paid to the holders of shares of Senior Preferred, the holders of shares of Junior Preferred then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders before any payment shall be made to the holders of Common Stock by reason of their ownership thereof, an amount per share equal to the Series A-1 Original Issue Price or Series A Original Issue Price, as the case may be, plus any dividends declared but unpaid thereon. If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Junior Preferred the full amount to which they shall be entitled under this Subsection 2.1.2, the holders of shares of Junior Preferred shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.2 Distribution of Remaining Assets. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation (including a Deemed Liquidation Event), after the payment of all preferential amounts required to be paid to the holders of shares of Senior Preferred and Junior Preferred, the remaining assets of the Corporation available for distribution to its stockholders shall be distributed among the holders of the shares of Senior Preferred and Common Stock, pro rata based on the number of shares held by each such holder, treating for this purpose all such securities as if they had been converted to Common Stock pursuant to the terms of the Certificate of Incorporation immediately prior to such dissolution, liquidation or winding up of the Corporation or Deemed Liquidation Event. The aggregate amount which a holder of a share of Senior Preferred is entitled to receive under Sections 2.1 and 2.2 is hereinafter referred to as the "**Senior Preferred Liquidation Amount**." The aggregate amount which a holder of a share of Junior Preferred is entitled to receive under Section 2.1 is hereinafter referred to as the "**Junior Preferred Liquidation Amount**."

2.3 Deemed Liquidation Events.

2.3.1 Definition. Each of the following events shall be considered a "**Deemed Liquidation Event**" unless the holders of (1) a majority of the outstanding shares of Series B Preferred Stock and (2) at least a majority of the outstanding shares of Series C Preferred Stock and Series D Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, elect otherwise by written notice sent to the Corporation at least ten days prior to the effective date of any such event:

(a) a merger or consolidation in which:

(i) the Corporation is a constituent party; or

(ii) a subsidiary of the Corporation is a constituent party and the Corporation issues shares of its capital stock pursuant to such merger or consolidation;

except any such merger or consolidation involving the Corporation or a subsidiary in which the shares of capital stock of the Corporation outstanding immediately prior to such merger or consolidation continue to represent, or are converted into or exchanged for shares of capital stock that represent, immediately following such merger or consolidation, a majority, by voting power, of the capital stock of (1) the surviving or resulting corporation or (2) if the surviving or resulting corporation is a wholly owned subsidiary of another corporation immediately following such merger or consolidation, the parent corporation of such surviving or resulting corporation (provided that, for the purpose of this Subsection 2.3.1, all shares of Common Stock issuable upon exercise of Options (as defined below) outstanding immediately prior to such merger or consolidation or upon conversion of Convertible Securities (as defined below) outstanding immediately prior to such merger or consolidation shall be deemed to be outstanding immediately prior to such merger or consolidation and, if applicable, converted or exchanged in such merger or consolidation on the same terms as the actual outstanding shares of Common Stock are converted or exchanged); or

(b) the sale, lease, transfer, exclusive license or other disposition, in a single transaction or series of related transactions, by the Corporation or any subsidiary of the Corporation of all or substantially all the assets of the Corporation and its subsidiaries taken as a whole, or the sale or disposition (whether by merger or otherwise) of one or more subsidiaries of the Corporation if substantially all of the assets of the Corporation and its subsidiaries taken as a whole are held by such subsidiary or subsidiaries, except where such sale, lease, transfer, exclusive license or other disposition is to a wholly owned subsidiary of the Corporation.

2.3.2 Effecting a Deemed Liquidation Event.

(a) The Corporation shall not have the power to effect a Deemed Liquidation Event referred to in Subsection 2.3.1(a)(i) unless the agreement or plan of merger or consolidation for such transaction (the "**Merger Agreement**") provides that the consideration payable to the stockholders of the Corporation shall be allocated among the holders of capital stock of the Corporation in accordance with Sections 2.1 and 2.2.

(b) In the event of a Deemed Liquidation Event referred to in Subsection 2.3.1(a)(ii) or 2.3.1(b), if the Corporation does not effect a dissolution of the Corporation under the General Corporation Law within 90 days after such Deemed Liquidation Event, then (i) the Corporation shall send a written notice to each holder of Senior Preferred and Junior Preferred no later than the 90th day after the Deemed Liquidation Event advising such holders of their right (and the requirements to be met to secure such right) pursuant to the terms of the following clause (ii) to require the redemption of such shares of Senior Preferred or Junior Preferred, as the case may be, and (ii) if the holders of (1) a majority of the then outstanding shares of Series B Preferred Stock and (2) at least a majority of the then outstanding shares of Series C Preferred Stock and Series D Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, so request in a written instrument delivered to the Corporation not later than 120 days after such Deemed Liquidation Event, the Corporation shall use the consideration received by the Corporation for such Deemed Liquidation Event (net of any retained liabilities associated with the assets sold or technology licensed, as determined in good faith by the Board of Directors of the Corporation), together with any other assets of the Corporation available for distribution to its stockholders (the "**Available Proceeds**"), to the extent legally available therefor, on the 150th day after such Deemed Liquidation Event (the "**Redemption Date**"), to redeem all outstanding shares of Senior Preferred and Junior Preferred at a price per share equal to the Senior Preferred Liquidation Amount or Junior Preferred Liquidation Amount, as the case may be. Notwithstanding the foregoing, in the event of a redemption pursuant to the preceding sentence, if the Available Proceeds are not sufficient to redeem all outstanding shares of Senior Preferred or Junior Preferred, as the case may be, the Corporation (A) shall first redeem a pro rata portion of each holder's shares of Senior Preferred based on the respective amounts which would otherwise be payable in respect of the shares to be redeemed if the Available Proceeds were sufficient to redeem all such shares and shall redeem the remaining shares to have been redeemed as soon as practicable after the Corporation has funds legally available therefor, and (B) shall redeem the remaining shares of Senior Preferred to have been redeemed as soon as practicable after the Corporation has funds legally available therefor and second, after all shares of Senior Preferred have been redeemed, shall redeem the Junior Preferred to the fullest extent of such Available Proceeds, based on the respective amounts which would otherwise be payable in respect of the shares to be redeemed if the Available Proceeds were sufficient to redeem all such shares and shall redeem the remaining shares to have been redeemed as soon as practicable after the Corporation has funds legally available therefor.

On or before the Redemption Date, each holder of shares of Senior Preferred and Junior Preferred to be redeemed on such Redemption Date, unless such holder has exercised his, her or its right to convert such shares as provided in Section 4, shall surrender the certificate or certificates representing such shares (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation, in the manner and at the place designated in the Corporation's notice, and thereupon the Senior Preferred Liquidation Amount and Junior Preferred Liquidation Amount, as the case may be, for such shares shall be payable to the order of the person whose name appears on such certificate or certificates as the owner thereof.

If on the applicable Redemption Date the redemption price payable upon redemption of the shares of Senior Preferred and Junior Preferred to be redeemed on the Redemption Date is paid or tendered for payment or deposited with an independent payment agent so as to be available therefor, then notwithstanding that the certificates evidencing any of the shares of Senior Preferred or Junior Preferred so called for redemption shall not have been surrendered, all rights with respect to such shares shall forthwith after the Redemption Date terminate, except only the right of the holders to receive the Senior Preferred Liquidation Amount or Junior Preferred Liquidation Amount, as the case may be, without interest upon surrender of their certificate or certificates therefor.

Prior to the distribution or redemption provided for in this Subsection 2.3.2(b), the Corporation shall not expend or dissipate the consideration received for such Deemed Liquidation Event, except to discharge expenses incurred in connection with such Deemed Liquidation Event or in the ordinary course of business.

2.3.3 Amount Deemed Paid or Distributed. The amount deemed paid or distributed to the holders of capital stock of the Corporation upon any such merger, consolidation, sale, transfer, exclusive license, other disposition or redemption shall be the cash or the value of the property, rights or securities paid or distributed to such holders by the Corporation or the acquiring person, firm or other entity. The value of such property, rights or securities shall be determined in good faith by the Board of Directors of the Corporation.

2.3.4 Allocation of Escrow. In the event of a Deemed Liquidation Event pursuant to Subsection 2.3.1(a)(i), if any portion of the consideration payable to the stockholders of the Corporation is placed into escrow and/or is payable to the stockholders of the Corporation subject to contingencies, the Merger Agreement shall provide that (a) the portion of such consideration that is not placed in escrow and not subject to any contingencies (the "**Initial Consideration**") shall be allocated among the holders of capital stock of the Corporation in accordance with Subsections 2.1 and 2.2 as if the Initial Consideration were the only consideration payable in connection with such Deemed Liquidation Event and (b) any additional consideration which becomes payable to the stockholders of the Corporation upon release from escrow or satisfaction of contingencies shall be allocated among the holders of capital stock of the Corporation in accordance with Sections 2.1 and 2.2 after taking into account the previous payment of the Initial Consideration as part of the same transaction.

3. Voting.

3.1 General. On any matter presented to the stockholders of the Corporation for their action or consideration at any meeting of stockholders of the Corporation (or by written consent of stockholders in lieu of meeting), each holder of outstanding shares of Preferred Stock shall be entitled to cast the number of votes equal to the number of whole shares of Common Stock into which the shares of Preferred Stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter. Except as provided by law or by the other provisions of the Certificate of Incorporation, holders of Preferred Stock shall vote together with the holders of Common Stock as a single class.

3.2 Election of Directors. The Board of Directors shall consist of seven (7) members.

3.2.1 The holders of record of shares of Series B Preferred Stock, voting exclusively and as a separate class, shall be entitled to elect two (2) directors of the Corporation (the "**Series B Directors**").

3.2.2 The holders of record of shares of Series C Preferred Stock, voting exclusively and as a separate class, shall be entitled to elect two (2) directors of the Corporation (the "**Series C Directors**", and together with the Series B Directors, the "**Preferred Directors**").

3.2.3 Together, the holders of Preferred Stock and Common Stock, voting as a single class on an as-converted basis, shall be entitled to elect three (3) directors of the Corporation.

3.2.4 Any director elected as provided in Subsections 3.2.1, 3.2.2 or 3.2.3 may be removed without cause by, and only by, the affirmative vote of the holders of the shares of the class or series of capital stock entitled to elect such director or directors, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders. If the holders of shares of stock entitled to elect such director or directors pursuant to Subsections 3.2.1, 3.2.2 or 3.2.3 fail to elect a sufficient number of directors to fill all directorships for which they are entitled to elect directors, voting exclusively and pursuant to Subsections 3.2.1, 3.2.2 or 3.2.3, as the case may be, then any directorship not so filled shall remain vacant until such time as such holders elect a person to fill such directorship by vote or written consent in lieu of a meeting; and no such directorship may be filled by stockholders of the Corporation other than by the stockholders of the Corporation that are entitled to elect a person to fill such directorship pursuant to Subsections 3.2.1, 3.2.2 or 3.2.3, as the case may be, voting exclusively and as a separate class . At any meeting held for the purpose of electing a director, the presence in person or by proxy of the holders of a majority of the outstanding shares of the class or series entitled to elect such director shall constitute a quorum for the purpose of electing such director. Except as otherwise provided in this Subsection 3.2.4, a vacancy in any directorship filled by the holders of any class or series shall be filled only by vote or written consent in lieu of a meeting of the holders of such class or series or by any remaining director or directors elected by the holders of such class or series pursuant to this Subsection 3.2.4. The rights of the holders to elect directors pursuant to Subsection 3.2.1 shall terminate on the first date following the Series E Original Issue Date (as defined below) on which there are issued and outstanding less than 2,000,000 shares of Series B Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock), after which the directors otherwise to be elected pursuant to Subsection 3.2.1 shall be elected by the holders of record of the Preferred Stock and Common Stock, voting together as a single class on an as-converted basis. The rights of the holders to elect directors pursuant to Subsection 3.2.2 shall terminate on the first date following the Series E Original Issue Date on which there are issued and outstanding less than 2,000,000 shares of Series C Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series C Preferred Stock), after which the directors otherwise to be elected pursuant to Subsection 3.2.2 shall be elected by the holders of record of the Preferred Stock and Common Stock, voting together as a single class on an as-converted basis.

3.3 Series E Preferred Stock Protective Provisions. At any time when shares of Series E Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly, by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or the Certificate of Incorporation) the written consent or affirmative vote of holders of at least a majority of the then outstanding shares of Series E Preferred Stock, given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class:

3.3.1 amend, alter or change any of the rights, preferences, privileges or powers of, or the restrictions provided for the benefit of the holders of, the Series E Preferred Stock;

3.3.2 amend, alter or repeal any provision of the Certificate of Incorporation or Bylaws of the Corporation in a manner that adversely affects the rights, preferences, privileges or powers of the Series E Preferred Stock;

3.3.3 increase or decrease the authorized number shares of Series E Preferred Stock;

3.3.4 take any action that results in the redemption or repurchase of the Series E Preferred Stock; or

3.3.5 redeem, repurchase (or permit any subsidiary to redeem or repurchase) or make other acquisitions of the Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Junior Preferred or Common Stock (other than repurchases of Common Stock or options to purchase Common Stock from former employees or consultants pursuant to the provisions of existing plans or agreements).

3.4 Series D Preferred Stock Protective Provisions. At any time when shares of Series D Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly, by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or the Certificate of Incorporation) the written consent or affirmative vote of holders of at least a majority of the then outstanding shares of Series D Preferred Stock, given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class:

3.4.1 amend, alter or change any of the rights, preferences, privileges or powers of, or the restrictions provided for the benefit of the holders of, the Series D Preferred Stock;

3.4.2 amend, alter or repeal any provision of the Certificate of Incorporation or Bylaws of the Corporation in a manner that adversely affects the rights, preferences, privileges or powers of the Series D Preferred Stock;

3.4.3 increase or decrease the authorized number shares of Series D Preferred Stock;

3.4.4 take any action that results in the redemption or repurchase of the Series D Preferred Stock;

3.4.5 redeem, repurchase (or permit any subsidiary to redeem or repurchase) or make other acquisitions of the Series C Preferred Stock, Series B Preferred Stock, Junior Preferred or Common Stock (other than repurchases of Common Stock or options to purchase Common Stock from former employees or consultants pursuant to the provisions of existing plans or agreements); or

3.4.6 declare or pay any dividends or distributions on the Series C Preferred Stock, Series B Preferred Stock, Junior Preferred or Common Stock.

3.5 Series C Preferred Stock Protective Provisions. At any time when shares of Series C Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly, by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or the Certificate of Incorporation) the written consent or affirmative vote of holders of at least 60% of the then outstanding shares of Series C Preferred Stock, given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class:

3.5.1 liquidate, dissolve or wind-up the business and affairs of the Corporation, effect any Deemed Liquidation Event, or consent to any of the foregoing;

3.5.2 amend, alter or change any of the rights, preferences, privileges or powers of, or the restrictions provided for the benefit of the holders of, the Series C Preferred Stock;

3.5.3 amend, alter or repeal any provision of the Certificate of Incorporation or Bylaws of the Corporation in a manner that adversely affects the powers, preferences or rights of the Series C Preferred Stock;

3.5.4 create, or authorize the creation of, or issue or obligate itself to issue shares of, any additional class or series of capital stock unless the same ranks junior to the Series C Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption, or increase the authorized number of shares of Series C Preferred Stock or increase the authorized number of shares of any additional class or series of capital stock unless the same ranks junior to the Series C Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption;

3.5.5 materially change the business of the Corporation;

3.5.6 increase or decrease the authorized number of directors constituting the Board of Directors;

3.5.7 declare or pay any dividends or distributions on the Preferred Stock or Common Stock; or

3.5.8 redeem, repurchase (or permit any subsidiary to redeem or repurchase) or make other acquisitions of any securities of the Corporation (other than repurchases of Common Stock or options to purchase Common Stock from former employees or consultants pursuant to the provisions of existing plans or agreements).

3.6 Series B Preferred Stock Protective Provisions. At any time when shares of Series B Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or the Certificate of Incorporation) the written consent or affirmative vote of the holders of a majority of the then outstanding shares of Series B Preferred Stock, given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class:

3.6.1 liquidate, dissolve or wind-up the business and affairs of the Corporation, effect any Deemed Liquidation Event, or consent to any of the foregoing;

3.6.2 amend, alter or change any of the rights, preferences, privileges or powers of, or the restrictions provided for the benefit of the holders of, the Series B Preferred Stock;

3.6.3 amend, alter or repeal any provision of the Certificate of Incorporation or Bylaws of the Corporation in a manner that adversely affects the powers, preferences or rights of the Series B Preferred Stock;

3.6.4 create, or authorize the creation of, or issue or obligate itself to issue shares of, any additional class or series of capital stock unless the same ranks junior to the Series B Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption, or increase the authorized number of shares of Series B Preferred Stock or increase the authorized number of shares of any additional class or series of capital stock unless the same ranks junior to the Series B Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption;

3.6.5 materially change the business of the Corporation;

3.6.6 increase or decrease the authorized number of directors constituting the Board of Directors;

3.6.7 declare or pay any dividends or distributions on the Preferred Stock or Common Stock; or

3.6.8 redeem, repurchase (or permit any subsidiary to redeem or repurchase) or make other acquisitions of any securities of the Corporation (other than repurchases of Common Stock or options to purchase Common Stock from former employees or consultants pursuant to the provisions of existing plans or agreements).

3.7 Junior Preferred Protective Provisions. At any time when shares of Junior Preferred are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or the Certificate of Incorporation) the written consent or affirmative vote of the holders of a majority of the then outstanding shares of Series A-1 Preferred Stock or Series A Preferred Stock, as the case may be, given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class:

3.7.1 amend, alter or change any of the rights, preferences, privileges or powers of, or the restrictions provided for the benefit of the holders of, the Series A-1 Preferred Stock or Series A Preferred Stock, as the case may be; or

3.7.2 increase the authorized number of shares of Series A-1 Preferred Stock or Series A Preferred Stock, as the case may be, or reissue shares of Series A-1 Preferred Stock or Series A Preferred Stock, as the case may be, that have been reacquired (including by way of purchase, redemption or conversion).

3.8 Special Vote. The approval of the holders of at least a majority of the Company's Senior Preferred, Junior Preferred and Common Stock voting together as a single class on an as-converted basis shall be required in order to purchase or redeem (or permit any subsidiary to purchase or redeem) any shares of capital stock of the Corporation other than (i) redemptions of the Preferred Stock as expressly authorized herein and (ii) repurchases of stock from former employees, officers, directors, consultants or other persons who performed services for the Corporation or any subsidiary in connection with the cessation of such employment or service pursuant to the agreements approved by the Board of Directors.

4. Optional Conversion.

The holders of the Preferred Stock shall have conversion rights as follows (the "**Conversion Rights**"):

4.1 Right to Convert.

4.1.1 Conversion Ratio. Each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing the Series E Original Issue Price, Series D Original Issue Price, the Series C Original Issue Price, Series B Original Issue Price, Series A-1 Original Issue Price or Series A Original Issue Price, as the case may be, by the relevant Conversion Price (as defined below) in effect for such series at the time of conversion. The "**Series E Conversion Price**" shall initially be equal to $10.5886. The "**Series D Conversion Price**" shall initially be equal to $2.7029. The "**Series C Conversion Price**" shall initially be equal to $2.17. The "**Series B Conversion Price**" shall initially be equal to $1.1937322. The "**Series A-1 Conversion Price**" shall initially be equal to $1.36. The "**Series A Conversion Price**" shall initially be equal to $50.00. Such initial Series E Conversion Price Series, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price and Series A Conversion Price, and the rate at which shares of Series E

Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock and Series A Preferred Stock, as the case may be, may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

4.1.2 Termination of Conversion Rights. In the event of a liquidation, dissolution or winding up of the Corporation or a Deemed Liquidation Event, the Conversion Rights shall terminate at the close of business on the last full day preceding the date fixed for the payment of any such amounts distributable on such event to the holders of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock and Series A Preferred Stock, as the case may be.

4.2 Fractional Shares. No fractional shares of Common Stock shall be issued upon conversion of the Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of a share of Common Stock as determined in good faith by the Board of Directors of the Corporation. Whether or not fractional shares would be issuable upon such conversion shall be determined on the basis of the total number of shares of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock or Series A Preferred Stock, as the case may be, the holder is at the time converting into Common Stock and the aggregate number of shares of Common Stock issuable upon such conversion.

4.3 Mechanics of Conversion.

4.3.1 Notice of Conversion. In order for a holder of Preferred Stock to voluntarily convert shares of Preferred Stock into shares of Common Stock, such holder shall surrender the certificate or certificates for such shares of Preferred Stock (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate), at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent), together with written notice that such holder elects to convert all or any number of the shares of the Preferred Stock represented by such certificate or certificates and, if applicable, any event on which such conversion is contingent. Such notice shall state such holder's name or the names of the nominees in which such holder wishes the certificate or certificates for shares of Common Stock to be issued. If required by the Corporation, certificates surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or his, her or its attorney duly authorized in writing. The close of business on the date of receipt by the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of such certificates (or lost certificate affidavit and agreement) and notice shall be the time of conversion (the "**Conversion Time**"), and the shares of Common Stock issuable upon conversion of the shares represented by such certificate shall be deemed to be outstanding of record as of such date. The Corporation shall, as soon as practicable after the Conversion Time, (i) issue and deliver to such holder of Preferred Stock, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion in accordance with the provisions

hereof and a certificate for the number (if any) of the shares of Preferred Stock represented by the surrendered certificate that were not converted into Common Stock, (ii) pay in cash such amount as provided in Section 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and (iii) pay all declared but unpaid dividends on the shares of Preferred Stock converted.

4.3.2 Reservation of Shares. The Corporation shall at all times when the Preferred Stock shall be outstanding, reserve and keep available out of its authorized but unissued capital stock, for the purpose of effecting the conversion of such Preferred Stock, such number of its duly authorized shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder approval of any necessary amendment to the Certificate of Incorporation. Before taking any action which would cause an adjustment reducing the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price, or Series A Conversion Price, as the case may be, below the then par value of the shares of Common Stock issuable upon conversion of the Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock or Series A Preferred Stock, as the case may be, the Corporation will take any corporate action which may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and nonassessable shares of Common Stock at such adjusted Series E Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price, or Series A Conversion Price, as the case may be.

4.3.3 Effect of Conversion. All shares of Preferred Stock which shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares shall immediately cease and terminate at the Conversion Time, except only the right of the holders thereof to receive shares of Common Stock in exchange therefor, to receive payment in lieu of any fraction of a share otherwise issuable upon such conversion as provided in Section 4.2 and to receive payment of any dividends declared but unpaid thereon. Any shares of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock or Series A Preferred Stock, as the case may be, so converted shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock or Series A Preferred Stock, as the case may be, accordingly.

4.3.4 No Further Adjustment. Upon any such conversion, no adjustment to the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price, or Series A Conversion Price, as the case may be, shall be made for any declared but unpaid dividends on the Series E Preferred Stock, Series

D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock or Series A Preferred Stock, as the case may be, surrendered for conversion or on the Common Stock delivered upon conversion.

4.3.5 Taxes. The Corporation shall pay any and all issue and other similar taxes that may be payable in respect of any issuance or delivery of shares of Common Stock upon conversion of shares of Preferred Stock pursuant to this Section 4. The Corporation shall not, however, be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of shares of Common Stock in a name other than that in which the shares of Preferred Stock so converted were registered, and no such issuance or delivery shall be made unless and until the person or entity requesting such issuance has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid.

4.4 Adjustments to Series E Conversion Price, Series D Conversion Price, Series C Conversion Price and Series B Conversion Price for Diluting Issues.

4.4.1 Special Definitions. For purposes of this Article Fourth, the following definitions shall apply:

(a) "**Option**" shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(b) "**Series E Original Issue Date**" shall mean the date on which the first share of Series E Preferred Stock was issued.

(c) "**Convertible Securities**" shall mean any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for Common Stock, but excluding Options.

(d) "**Additional Shares of Common Stock**" shall mean all shares of Common Stock issued (or, pursuant to Subsection 4.4.3 below, deemed to be issued) by the Corporation after the Series E Original Issue Date, other than (1) the following shares of Common Stock and (2) shares of Common Stock deemed issued pursuant to the following Options and Convertible Securities (clauses (1) and (2), collectively, "**Exempted Securities**"):

(i) Shares of Common Stock, Options or Convertible Securities issued by reason of a dividend, stock split, split-up or other distribution on shares of Common Stock that is covered by Sections 4.5, 4.6, 4.7 or 4.8;

(ii) Common Stock issued upon conversion of Preferred Stock;

(iii) 13,174,545 shares of Common Stock (or Options with respect thereto) (subject in either case to appropriate adjustment in the event of any stock

dividend, stock split, combination or other similar recapitalization with respect to such shares) issued or issuable to employees or directors of, or consultants to, the Corporation under the Corporation's 2009 Stock Incentive Plan (it being understood that that any shares of Common Stock (i) not issued pursuant to rights, agreements, option or warrants ("Unexercised Options") as a result of the termination of such Unexercised Options or (ii) reacquired by the Corporation from employees, directors or consultants at no more than cost pursuant to agreements that permit the Corporation to repurchase such shares upon termination of services to the Corporation shall not be counted toward such maximum number unless and until such shares are regranted as shares of Common Stock and/or options, warrants or other Common Stock purchase rights);

(iv) shares of Common Stock or Convertible Securities issued or issuable upon conversion or exchange of any Convertible Securities or exercise of any Options outstanding on the Series E Original Issue Date, in each case provided such issuance is pursuant to the terms of such Option or Convertible Security;

(v) shares of Common Stock, Options or Convertible Securities issued to banks, equipment lessors or other financial institutions, or to real property lessors, pursuant to a debt financing, equipment leasing or real property leasing transaction approved by the Board of Directors of the Corporation, that do not exceed an aggregate of 2% of the shares of Common Stock outstanding immediately prior to such issuance (treating for this purpose as outstanding all shares of Common Stock issuable upon exercise of Options outstanding immediately prior to such issue (whether or not vested) or upon conversion or exchange of Convertible Securities (including the Preferred Stock) outstanding (assuming exercise of any outstanding Options therefor) immediately prior to such issue); and

(vi) shares of Common Stock, Options or Convertible Securities issued in connection with sponsored research, collaboration, technology license,

development, OEM, marketing or other similar agreements or strategic partnerships, that are primarily of a non-equity financing nature, approved by the Board of Directors of the Corporation, that do not exceed an aggregate of 2% of the shares of Common Stock outstanding immediately prior to such issuance (treating for this purpose as outstanding all shares of Common Stock issuable upon exercise of Options outstanding immediately prior to such issue (whether or not vested) or upon conversion or exchange of Convertible Securities (including the Preferred Stock) outstanding (assuming exercise of any outstanding Options therefor) immediately prior to such issue).

4.4.2 No Adjustment of Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price. No adjustment of the Series E Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of at least a majority of the then outstanding shares of Series E Preferred Stock, agreeing that no such adjustment shall be made as a result of the issuance or deemed issuance of such Additional Shares of Common Stock. No adjustment of the Series D Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of at least 60% of the then outstanding shares of Series D Preferred Stock, agreeing that no such adjustment shall be made as a result of the issuance or deemed issuance of such Additional Shares of Common Stock. No adjustment to the Series C Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of at least 60% of the then outstanding shares of Series C Preferred Stock, agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock. No adjustment to the Series B Conversion Price shall be made as a result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of at least a majority of the then outstanding shares of Series B Preferred Stock agreeing that no such adjustment shall be made as a result of the issuance or deemed issuance of such Additional Shares of Common Stock.

4.4.3 Deemed Issue of Additional Shares of Common Stock.

(a) If the Corporation at any time or from time to time after the Series E Original Issue Date shall issue any Options or Convertible Securities (excluding Options or Convertible Securities which are themselves Exempted Securities) or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares of Common Stock (as set forth in the instrument relating thereto, assuming the satisfaction of any conditions to exercisability, convertibility or exchangeability but without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options

or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of such issue or, in case such a record date shall have been fixed, as of the close of business on such record date.

(b) If the terms of any Option or Convertible Security, the issuance of which resulted in an adjustment to the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price, as the case may be, pursuant to the terms of Subsection 4.4.4 below, are revised as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase or decrease in the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any such Option or Convertible Security or (2) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion and/or exchange, then, effective upon such increase or decrease becoming effective, the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price, as the case may be, computed upon the original issue of such Option or Convertible Security (or upon the occurrence of a record date with respect thereto) shall be readjusted to such Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price, as the case may be, as would have been obtained had such revised terms been in effect upon the original date of issuance of such Option or Convertible Security. Notwithstanding the foregoing, (x) no readjustment pursuant to this clause (b) shall have the effect of increasing the Series E Conversion Price, Series D Conversion Price or Series C Conversion Price, as the case may be, to an amount which exceeds the lower of (i) the Series E Conversion Price, the Series D Conversion Price or Series C Conversion Price, as the case may be, in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (ii) the Series E Conversion Price, the Series D Conversion Price or Series C Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date and (y) no readjustment pursuant to this clause (b) shall have the effect of increasing the Series B Conversion Price to an amount which exceeds the lower of (i) the Series B Conversion Price in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (ii) the Series B Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date.

(c) If the terms of any Option or Convertible Security (excluding Options or Convertible Securities which are themselves Exempted Securities), the issuance of which did not result in an adjustment to the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price pursuant to the terms of Subsection 4.4.4 (either because the consideration per share (determined pursuant to Subsection 4.4.5) of the Additional Shares of Common Stock subject thereto was equal to or greater than the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price, as the case may be, then in effect, or because such Option or

Convertible Security was issued before the Series E Original Issue Date), are revised after the Series E Original Issue Date as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Option or Convertible Security or (2) any decrease in the consideration payable to the Corporation upon such exercise, conversion or exchange, then such Option or Convertible Security, as so amended or adjusted, and the Additional Shares of Common Stock subject thereto (determined in the manner provided in Subsection 4.4.3(a)) shall be deemed to have been issued effective upon such increase or decrease becoming effective.

(d) Upon the expiration or termination of any unexercised Option or unconverted or unexchanged Convertible Security (or portion thereof) which resulted (either upon its original issuance or upon a revision of its terms) in an adjustment to the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price pursuant to the terms of Subsection 4.4.4, the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price, as the case may be, shall be readjusted to such Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price, as the case may be, as would have obtained had such Option or Convertible Security (or portion thereof) never been issued.

(e) If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, is calculable at the time such Option or Convertible Security is issued or amended but is subject to adjustment based upon subsequent events, any adjustment to the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price provided for in this Subsection 4.4.3 shall be effected at the time of such issuance or amendment based on such number of shares or amount of consideration without regard to any provisions for subsequent adjustments (and any subsequent adjustments shall be treated as provided in clauses (b) and (c) of this Subsection 4.4.3). If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, cannot be calculated at all at the time such Option or Convertible Security is issued or amended, any adjustment to the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price that would result under the terms of this Subsection 4.4.3 at the time of such issuance or amendment shall instead be effected at the time such number of shares and/or amount of consideration is first calculable (even if subject to subsequent adjustments), assuming for purposes of calculating such adjustment to the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price that such issuance or amendment took place at the time such calculation can first be made.

4.4.4 Adjustment of Series E Conversion Price, Series D Conversion Price, Series C Conversion Price and Series B Conversion Price Upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time after the Series E Original Issue Date issue Additional Shares of Common Stock (including Additional Shares of

Common Stock deemed to be issued pursuant to Subsection 4.4.3), without consideration or for a consideration per share less than the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price, as the case may be, in effect immediately prior to such issue, then the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price and/or Series B Conversion Price, as the case may be, shall be reduced, concurrently with such issue, to a price (calculated to the nearest one-hundredth of a cent) determined in accordance with the following formula:

$$CP_2 = CP_1 * (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

(a) "CP_2" shall mean the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price, as the case may be, in effect immediately after such issue of Additional Shares of Common Stock

(b) "CP_1" shall mean the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price, as the case may be, in effect immediately prior to such issue of Additional Shares of Common Stock;

(c) "A" shall mean the number of shares of Common Stock outstanding immediately prior to such issue of Additional Shares of Common Stock (treating for this purpose as outstanding all shares of Common Stock issuable upon exercise of Options outstanding immediately prior to such issue (whether or not vested) or upon conversion or exchange of Convertible Securities (including the Preferred Stock) outstanding (assuming exercise of any outstanding Options therefor) immediately prior to such issue);

(d) "B" shall mean the number of shares of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued at a price per share equal to CP_1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP_1); and

(e) "C" shall mean the number of such Additional Shares of Common Stock issued in such transaction.

4.4.5 Determination of Consideration. For purposes of this Section 4.4, the consideration received by the Corporation for the issue of any Additional Shares of Common Stock shall be computed as follows:

(a) Cash and Property: Such consideration shall:

(i) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation, excluding amounts paid or payable for accrued interest;

(ii) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board of Directors of the Corporation; and

(iii) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration which covers both, be the proportion of such consideration so received, computed as provided in clauses (i) and (ii) above, as determined in good faith by the Board of Directors of the Corporation.

(b) Options and Convertible Securities. The consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to Subsection 4.4.3, relating to Options and Convertible Securities, shall be determined by dividing:

(i) the total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities, by

(ii) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities.

4.4.6 Multiple Closing Dates. In the event the Corporation shall issue on more than one date Additional Shares of Common Stock that are a part of one transaction or a series of related transactions and that would result in an adjustment to the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price pursuant to the terms of Subsection 4.4.4 then, upon the final such issuance, the Series E

Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price, as the case may be, shall be readjusted to give effect to all such issuances as if they occurred on the date of the first such issuance (and without giving effect to any additional adjustments as a result of any such subsequent issuances within such period).

4.5 Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time after the Series E Original Issue Date effect a subdivision of the outstanding Common Stock, the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price and Series A Conversion Price, as the case may be, in effect immediately before that subdivision shall be proportionately decreased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in the aggregate number of shares of Common Stock outstanding. If the Corporation shall at any time or from time to time after the Series E Original Issue Date combine the outstanding shares of Common Stock, the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price and Series A Conversion Price, as the case may be, in effect immediately before the combination shall be proportionately increased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in the aggregate number of shares of Common Stock outstanding. Any adjustment under this Section 4.5 shall become effective at the close of business on the date the subdivision or combination becomes effective.

4.6 Adjustment for Certain Dividends and Distributions. In the event the Corporation at any time or from time to time after the Series E Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable on the Common Stock in additional shares of Common Stock, then and in each such event the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price and Series A Conversion Price, as the case may be, in effect immediately before such event shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business on such record date, by multiplying the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price and Series A Conversion Price, as the case may be, then in effect by a fraction:

(1) the numerator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date, and

(2) the denominator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date plus the number of shares of Common Stock issuable in payment of such dividend or distribution.

Notwithstanding the foregoing, (a) if such record date shall have been fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, the Series E

Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price and Series A Conversion Price, as the case may be, shall be recomputed accordingly as of the close of business on such record date and thereafter the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price and Series A Conversion Price, as the case may be, shall be adjusted pursuant to this Section 4.6 as of the time of actual payment of such dividends or distributions; and (b) no such adjustment shall be made if the holders of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be, simultaneously receive a dividend or other distribution of shares of Common Stock in a number equal to the number of shares of Common Stock as they would have received if all outstanding shares of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be, had been converted into Common Stock on the date of such event.

4.7 Adjustments for Other Dividends and Distributions. In the event the Corporation at any time or from time to time after the Series E Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in securities of the Corporation (other than a distribution of shares of Common Stock in respect of outstanding shares of Common Stock) or in other property and the provisions of Section 1 do not apply to such dividend or distribution, then and in each such event the holders of Preferred Stock shall receive, simultaneously with the distribution to the holders of Common Stock, a dividend or other distribution of such securities or other property in an amount equal to the amount of such securities or other property as they would have received if all outstanding shares of Preferred Stock had been converted into Common Stock on the date of such event.

4.8 Adjustment for Merger or Reorganization, etc. Subject to the provisions of Section 2.3, if there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Corporation in which the Common Stock (but not the Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be) is converted into or exchanged for securities, cash or other property (other than a transaction covered by Sections 4.4, 4.6 or 4.7), then, following any such reorganization, recapitalization, reclassification, consolidation or merger, each share of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be, shall thereafter be convertible in lieu of the Common Stock into which it was convertible prior to such event into the kind and amount of securities, cash or other property which a holder of the number of shares of Common Stock of the Corporation issuable upon conversion of one share of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be, immediately prior to such reorganization, recapitalization, reclassification, consolidation or merger would have been entitled to receive pursuant to such transaction; and, in such case, appropriate adjustment (as determined in good faith by the Board of Directors of the Corporation) shall be made in the application of the provisions in this Section 4 with respect to the rights and interests thereafter of the holders of the Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred

Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be, to the end that the provisions set forth in this Section 4 (including provisions with respect to changes in and other adjustments of the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price or Series A Conversion Price, as the case may be) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities or other property thereafter deliverable upon the conversion of the Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be.

4.9 Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price or Series A Conversion Price, as the case may be, pursuant to this Section 4, the Corporation at its expense shall, as promptly as reasonably practicable but in any event not later than 10 days thereafter, compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be, a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which the Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be, is convertible) and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, as promptly as reasonably practicable after the written request at any time of any holder of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be (but in any event not later than 10 days thereafter), furnish or cause to be furnished to such holder a certificate setting forth (i) the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price or Series A Conversion Price, as the case may be, then in effect, and (ii) the number of shares of Common Stock and the amount, if any, of other securities, cash or property which then would be received upon the conversion of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be.

4.10 Notice of Record Date. In the event:

(a) the Corporation shall take a record of the holders of its Common Stock (or other capital stock or securities at the time issuable upon conversion of the Preferred Stock) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of capital stock of any class or any other securities, or to receive any other security; or

(b) of any capital reorganization of the Corporation, any reclassification of the Common Stock of the Corporation, or any Deemed Liquidation Event; or

(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Corporation,

then, and in each such case, the Corporation will send or cause to be sent to the holders of the Preferred Stock a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is proposed to take place, and the time, if any is to be fixed, as of which the holders of record of Common Stock (or such other capital stock or securities at the time issuable upon the conversion of the Preferred Stock) shall be entitled to exchange their shares of Common Stock (or such other capital stock or securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up, and the amount per share and character of such exchange applicable to the Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, Series A Preferred Stock and the Common Stock. Such notice shall be sent at least 20 days prior to the record date or effective date for the event specified in such notice.

5. Mandatory Conversion.

5.1 Trigger Events. Upon either (a) the closing of the sale of shares of Common Stock to the public in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended (or in a jurisdiction and on a recognized securities exchange outside of the United States provided that such public offering in terms of price, offering proceeds and regulatory approval is reasonably equivalent to a United States public offering), resulting in at least $45,000,000 of gross proceeds, net of the underwriting discount and commissions, to the Corporation; provided, that the Common Stock been listed for trading on a “national securities exchange” registered with the U.S. Securities and Exchange Commission under Section 6 of the Securities Exchange Act of 1934, as amended, or (b) the date and time, or the occurrence of an event, specified by vote or written consent of the holders of (1) a majority of the then outstanding shares of Series B Preferred Stock, (2) a majority of the then outstanding shares of Series C Preferred Stock, and (3) at least 60% of the then outstanding shares of Series D Preferred Stock (the time of such closing or the date and time specified or the time of the event specified in such vote or written consent is referred to herein as the “**Mandatory Conversion Time**”), (i) all outstanding shares of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock and Series A Preferred Stock shall automatically be converted into shares of Common Stock, at the then effective conversion rate and (ii) such shares may not be reissued by the Corporation.

5.2 Procedural Requirements. All holders of record of shares of Preferred Stock shall be sent written notice of the Mandatory Conversion Time and the place designated for mandatory conversion of all such shares of Preferred Stock pursuant to this Section 5. Such notice need not be sent in advance of the occurrence of the Mandatory Conversion Time. Upon receipt of such notice, each holder of shares of Preferred Stock shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice. If so required by the Corporation, certificates

surrendered for conversion shall be endorsed or accompanied by written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized in writing. All rights with respect to the Preferred Stock converted pursuant to Section 5.1, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the Mandatory Conversion Time (notwithstanding the failure of the holder or holders thereof to surrender the certificates at or prior to such time), except only the rights of the holders thereof, upon surrender of their certificate or certificates (or lost certificate affidavit and agreement) therefor, to receive the items provided for in the next sentence of this Section 5.2. As soon as practicable after the Mandatory Conversion Time and the surrender of the certificate or certificates (or lost certificate affidavit and agreement) for Preferred Stock, the Corporation shall issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof, together with cash as provided in Section 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and the payment of any declared but unpaid dividends on the shares of Preferred Stock converted. Such converted Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be, accordingly.

6. Redemption. The Preferred Stock is not redeemable except in accordance with the Deemed Liquidation provisions in Subsection 2.3.2(b).

7. Redeemed or Otherwise Acquired Shares. Any shares of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be, that are redeemed or otherwise acquired by the Corporation or any of its subsidiaries shall be automatically and immediately cancelled and retired and shall not be reissued, sold or transferred. Neither the Corporation nor any of its subsidiaries may exercise any voting or other rights granted to the holders of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be, following redemption.

8. Waiver. Any of the rights, powers, preferences and other terms of the Series E Preferred Stock set forth herein may be waived on behalf of all holders of Series E Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series E Preferred Stock then outstanding. Except for matters set forth herein requiring the vote or consent of the holders of a majority of the Series D Preferred Stock and Series C Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, or the holders of at least 60% of the then outstanding shares of Series D Preferred Stock, any of the rights, powers, preferences and other terms of the Series D Preferred Stock set forth herein may be waived on behalf of all holders of Series D Preferred Stock by the affirmative, written consent or vote of the holders of at least a majority of Series D Preferred Stock then outstanding. Except for matters set forth herein requiring the vote or consent of the holders of a majority of the Series D Preferred Stock and Series C Preferred Stock, voting together as a single class on an as-

converted to Common Stock basis, any of the rights, powers, preferences and other terms of the Series C Preferred Stock set forth herein may be waived on behalf of all holders of Series C Preferred Stock by the affirmative written consent or vote of the holders of at least 60% of the shares of Series C Preferred Stock then outstanding. Any of the rights, powers, preferences and other terms of the Series B Preferred Stock set forth herein may be waived on behalf of all holders of Series B Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series B Preferred Stock then outstanding. Any of the rights, powers, preferences and other terms of the Series A-1 Preferred Stock set forth herein may be waived on behalf of all holders of Series A-1 Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series A-1 Preferred Stock then outstanding. Any of the rights, powers, preferences and other terms of the Series A Preferred Stock set forth herein may be waived on behalf of all holders of Series A Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series A Preferred Stock then outstanding.

9. Notices. Any notice required or permitted by the provisions of this Article Fourth to be given to a holder of shares of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be, shall be deemed given (A) if in the United States, via United States mail, postage prepaid and addressed to each holder of record at his address appearing on the books of this corporation when received, (B) if outside the United States, via United States mail, postage prepaid and addressed to each holder of record at his address appearing on the books of this corporation when received or (C) by electronic communication in compliance with the provisions of the General Corporation Law, upon such mailing or electronic transmission.

FIFTH: Subject to any additional vote required by the Certificate of Incorporation or Bylaws, in furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, repeal, alter, amend and rescind any or all of the Bylaws of the Corporation.

SIXTH: Subject to any additional vote required by the Certificate of Incorporation, the number of directors of the Corporation shall be determined in the manner set forth in the Bylaws of the Corporation.

SEVENTH: Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

EIGHTH: Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws of the Corporation may provide. The books of the Corporation may be kept outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

NINTH: To the fullest extent permitted by law, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the General Corporation Law or any other law of the State of Delaware is amended after approval by the stockholders of this Article Ninth to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law as so amended.

Any repeal or modification of the foregoing provisions of this Article Ninth by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of, or increase the liability of any director of the Corporation with respect to any acts or omissions of such director occurring prior to, such repeal or modification.

TENTH: To the fullest extent permitted by applicable law, the Corporation is authorized to provide indemnification of (and advancement of expenses to) directors, officers and agents of the Corporation (and any other persons to which General Corporation Law permits the Corporation to provide indemnification) through Bylaw provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise, in excess of the indemnification and advancement otherwise permitted by Section 145 of the General Corporation Law.

Any amendment, repeal or modification of the foregoing provisions of this Article Tenth shall not adversely affect any right or protection of any director, officer or other agent of the Corporation existing at the time of such amendment, repeal or modification.

ELEVENTH: To the maximum extent permitted from time to time under the law of the State of Delaware, the Corporation renounces any interest or expectancy of the Corporation in, or being offered an opportunity to participate in, business opportunities that are from time to time being presented to its officers, directors or stockholders, other than (i) those officers, directors or stockholders who are employees of the Corporation and (ii) those opportunities demonstrated by the Corporation to have been presented to such officers, directors or stockholders expressly as a result of their activities as a director, officer or stockholder of the Corporation. No amendment or repeal of this provision shall apply to or have any effect on the liability or alleged liability of any officer, director or stockholder of the Corporation for or with respect to any opportunities to which such officer, director or stockholder becomes aware prior to such amendment or repeal.

TWELTH: In connection with repurchases by the Corporation of its Common Stock from employees, officers, directors, advisors, consultants or other persons performing services for the Corporation or any subsidiary pursuant to agreements under which the Corporation has the option to repurchase such shares at cost upon the occurrence of certain events, such as the termination of employment, Sections 502 and 503 of the California Corporations Code shall not apply in all or in part with respect to such repurchases.

IN WITNESS WHEREOF, this Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of the Corporation on this 23rd day of March, 2015.

/s/ Stephen T. Isaacs

Stephen T. Isaacs, President

Exhibit 3.2

CERTIFICATE OF AMENDMENT OF
AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
ADURO BIOTECH, INC.

The undersigned hereby certifies that:

1. He is the duly elected and acting President of Aduro Biotech, Inc., a Delaware corporation (the "**Corporation**").

2. The Certificate of Incorporation of the Corporation was originally filed with the Secretary of State of Delaware on May 5, 2011. The Amended and Restated Certificate of Incorporation of the Corporation was filed with the Secretary of State of Delaware on March 23, 2015 (the "**Restated Certificate**").

3. Pursuant to Section 242 of the General Corporation Law of the State of Delaware, this Certificate of Amendment of the Amended and Restated Certificate of Incorporation amends Article Fourth to strike out the first paragraph of Article Fourth and substituting in lieu of said paragraph the following two paragraphs:

> "**FOURTH:** The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 90,000,000 shares of Common Stock, $0.0001 par value per share ("**Common Stock**"), and (ii) 74,438,403 shares of Preferred Stock, $0.0001 par value per share ("**Preferred Stock**"), of which 161,843 have been designated as Series A Preferred Stock (the "**Series A Preferred Stock**"), 3,393,666 have been designated as Series A-1 Preferred Stock (the "**Series A-1 Preferred Stock**"), 21,525,480 have been designated as Series B Preferred Stock (the "**Series B Preferred Stock**"), 25,623,183 have been designated as Series C Preferred Stock (the "**Series C Preferred Stock**"), 19,012,173 have been designated as Series D Preferred Stock (the "**Series D Preferred Stock**"), and 4,722,058 have been designated as Series E Preferred Stock (the "**Series E Preferred Stock**").
>
> Effective when this Certificate of Amendment of Certificate of Incorporation is filed with the Secretary of State of the State of Delaware, each one (1) outstanding share of Common Stock, par value $0.0001 per share, shall, automatically and without any action on the part of the respective holders thereof, be combined and converted into 0.72 of a share of Common Stock, par value $0.0001 per share; provided, however, that the Corporation shall issue no fractional shares as a result of the actions set forth herein

but shall instead pay to the holder of such fractional share a sum in cash equal to such fraction multiplied by the fair market value of one share of Common Stock on the day before the date this Certificate of Amendment of Certificate of Incorporation is filed with the Secretary of State of the State of Delaware."

4. The foregoing Certificate of Amendment of the Amended and Restated Certificate of Incorporation has been duly adopted by this Corporation's Board of Directors and stockholders in accordance with the applicable provisions of Sections 228 and 242 of the General Corporation Law of the State of Delaware.

In Witness Whereof, the Corporation has caused this Certificate of Amendment to be signed by its President and Chief Executive Officer this 1st day of April, 2015.

ADURO BIOTECH, INC.

By: /s/ Stephen T. Isaacs
Stephen T. Isaacs, President

AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION
OF
ADURO BIOTECH, INC.

Stephen T. Isaacs hereby certifies that:

ONE: The date of filing the original Certificate of Incorporation of this company with the Secretary of State of the State of Delaware was May 5, 2011.

TWO: He is the duly elected and acting Chairman and Chief Executive Officer of Aduro Biotech, Inc., a Delaware corporation.

THREE: The Certificate of Incorporation of this company is hereby amended and restated to read as follows:

I.

The name of this company is **ADURO BIOTECH, INC.** (the "***Company***" or the "***Corporation***").

II.

The address of the registered office of this Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, Wilmington, Delaware 19801, and the name of the registered agent of this Corporation in the State of Delaware at such address is The Corporation Trust Company.

III.

The purpose of this Company is to engage in any lawful act or activity for which a corporation may be organized under the Delaware General Corporation Law ("***DGCL***").

IV.

A. This Company is authorized to issue two classes of stock to be designated, respectively, "***Common Stock***" and "***Preferred Stock***." The total number of shares which the Company is authorized to issue is 310,000,000 shares. 300,000,000 shares shall be Common Stock, each having a par value of one-hundredth of one cent ($0.0001). 10,000,000 shares shall be Preferred Stock, each having a par value of one-hundredth of one cent ($0.0001).

B. The Preferred Stock may be issued from time to time in one or more series. The Board of Directors of the Company (the "***Board of Directors***") is hereby expressly authorized to provide for the issue of all of any of the shares of the Preferred Stock in one or more series, and to fix the number of shares and to determine or alter for each such series, such voting powers, full or limited, or no voting powers, and such designation, preferences, and relative, participating, optional, or other rights and such qualifications, limitations, or restrictions thereof, as shall be stated and expressed in the resolution or resolutions adopted by the Board of Directors providing for the issuance of such shares and as may be permitted by the DGCL. The Board of Directors is also expressly authorized to increase or decrease the number of shares of any series subsequent to the issuance of shares of that series, but not below the number of shares of such series then outstanding. In case the number of shares of any series shall be

decreased in accordance with the foregoing sentence, the shares constituting such decrease shall resume the status that they had prior to the adoption of the resolution originally fixing the number of shares of such series. The number of authorized shares of Preferred Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the voting power of the stock of the corporation entitled to vote thereon, without a separate vote of the holders of the Preferred Stock, or of any series thereof, unless a vote of any such holders is required pursuant to the terms of any certificate of designation filed with respect to any series of Preferred Stock.

C. Each outstanding share of Common Stock shall entitle the holder thereof to one vote on each matter properly submitted to the stockholders of the corporation for their vote; *provided*, *however*, that, except as otherwise required by law, holders of Common Stock shall not be entitled to vote on any amendment to this Amended and Restated Certificate of Incorporation (including any certificate of designation filed with respect to any series of Preferred Stock) that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together as a class with the holders of one or more other such series, to vote thereon by law or pursuant to this Amended and Restated Certificate of Incorporation (including any certificate of designation filed with respect to any series of Preferred Stock).

V.

For the management of the business and for the conduct of the affairs of the Company, and in further definition, limitation and regulation of the powers of the Company, of its directors and of its stockholders or any class thereof, as the case may be, it is further provided that:

A. MANAGEMENT OF BUSINESS. The management of the business and the conduct of the affairs of the Company shall be vested in its Board of Directors. The number of directors which shall constitute the Board of Directors shall be fixed exclusively by resolutions adopted by a majority of the authorized number of directors constituting the Board of Directors.

B. BOARD OF DIRECTORS

Subject to the rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances, following the closing of the initial public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended (the "***1933 Act***"), covering the offer and sale of Common Stock to the public (the "***Initial Public Offering***"), the directors shall be divided into three classes designated as Class I, Class II and Class III, respectively. The Board of Directors is authorized to assign members of the Board of Directors already in office to such classes at the time the classification becomes effective. At the first annual meeting of stockholders following the closing of the Initial Public Offering, the term of office of the Class I directors shall expire and Class I directors shall be elected for a full term of three years. At the second annual meeting of stockholders following the closing of the Initial Public Offering, the term of office of the Class II directors shall expire and Class II directors shall be elected for a full term of three years. At the third annual meeting of stockholders following the closing of the Initial Public Offering, the term of office of the Class III directors shall expire and Class III directors shall be elected for a full term of three years. At each succeeding annual meeting of stockholders, directors shall be elected for a full term of three years to succeed the directors of the class whose terms expire at such annual meeting.

Notwithstanding the foregoing provisions of this section, each director shall serve until his or her successor is duly elected and qualified or until his or her earlier death, resignation or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

C. REMOVAL OF DIRECTORS.

a. Subject to the rights of any series of Preferred Stock to elect additional directors under specified circumstances, following the closing of the Initial Public Offering, neither the Board of Directors nor any individual director may be removed without cause.

b. Subject to any limitation imposed by law, any individual director or directors may be removed with cause by the affirmative vote of the holders of at least sixty-six and two-thirds percent (66 2/3%) of the voting power of all then-outstanding shares of capital stock of the Corporation entitled to vote generally at an election of directors.

D. VACANCIES. Subject to any limitations imposed by applicable law and subject to the rights of the holders of any series of Preferred Stock, any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal or other causes and any newly created directorships resulting from any increase in the number of directors, shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by the stockholders and except as otherwise provided by applicable law, be filled only by the affirmative vote of a majority of the directors then in office, even though less than a quorum of the Board of Directors, and not by the stockholders. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the director for which the vacancy was created or occurred and until such director's successor shall have been elected and qualified.

E. BYLAW AMENDMENTS.

1. The Board of Directors is expressly empowered to adopt, amend or repeal the Bylaws of the Company. Any adoption, amendment or repeal of the Bylaws of the Company by the Board of Directors shall require the approval of a majority of the authorized number of directors. The stockholders shall also have power to adopt, amend or repeal the Bylaws of the Company; *provided, however,* that, in addition to any vote of the holders of any class or series of stock of the Company required by law or by this Amended and Restated Certificate of Incorporation, such action by stockholders shall require the affirmative vote of the holders of at least sixty-six and two-thirds percent (66 2/3%) of the voting power of all of the then-outstanding shares of the capital stock of the Company entitled to vote generally in the election of directors, voting together as a single class.

2. The directors of the Company need not be elected by written ballot unless the Bylaws so provide.

3. No action shall be taken by the stockholders of the Company except at an annual or special meeting of stockholders called in accordance with the Bylaws, and no action shall be taken by the stockholders by written consent or electronic transmission.

4. Advance notice of stockholder nominations for the election of directors and of business to be brought by stockholders before any meeting of the stockholders of the Company shall be given in the manner provided in the Bylaws of the Company.

VI.

A. The liability of the directors for monetary damages shall be eliminated to the fullest extent under applicable law.

B. To the fullest extent permitted by applicable law, the Company is authorized to provide indemnification of (and advancement of expenses to) directors, officers and agents of the Company (and

any other persons to which applicable law permits the Company to provide indemnification) through Bylaw provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise in excess of the indemnification and advancement otherwise permitted by such applicable law. If applicable law is amended after approval by the stockholders of this Article VI to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director to the company shall be eliminated or limited to the fullest extent permitted by applicable law as so amended.

C. Any repeal or modification of this Article VI shall only be prospective and shall not affect the rights or protections or increase the liability of any director under this Article VI in effect at the time of the alleged occurrence of any act or omission to act giving rise to liability or indemnification.

VII.

Unless the Corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for (A) any derivative action or proceeding brought on behalf of the Company; (B) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the Company to the Company or the Company's stockholders; (C) any action asserting a claim against the Company arising pursuant to any provision of the DGCL, the Amended and Restated Certificate of Incorporation or the Bylaws of the Company; or (D) any action asserting a claim against the Company governed by the internal affairs doctrine. Any person or entity purchasing or otherwise acquiring any interest in shares of capital stock of the Company shall be deemed to have notice of and to have consented to the provisions of this Article VII.

VIII.

A. The Company reserves the right to amend, alter, change or repeal any provision contained in this Amended and Restated Certificate of Incorporation, in the manner now or hereafter prescribed by statute, except as provided in paragraph B. of this Article VIII, and all rights conferred upon the stockholders herein are granted subject to this reservation.

B. Notwithstanding any other provisions of this Amended and Restated Certificate of Incorporation or any provision of law which might otherwise permit a lesser vote or no vote, but in addition to any affirmative vote of the holders of any particular class or series of the Company required by law or by this Amended and Restated Certificate of Incorporation or any certificate of designation filed with respect to a series of Preferred Stock, the affirmative vote of the holders of at least sixty-six and two-thirds percent (66-2/3%) of the voting power of all of the then outstanding shares of capital stock of the Company entitled to vote generally in the election of directors, voting together as a single class, shall be required to alter, amend or repeal Articles V, VI, VII and VIII.

* * * *

FOUR: This Amended and Restated Certificate of Incorporation has been duly approved by the Board of Directors of the Company.

FIVE: This Amended and Restated Certificate of Incorporation was approved by the holders of the requisite number of shares of said corporation in accordance with Section 228 of the DGCL. This Amended and Restated Certificate of Incorporation has been duly adopted in accordance with the provisions of Sections 242 and 245 of the DGCL by the stockholders of the Company.

IN WITNESS WHEREOF, Aduro Biotech, Inc. has caused this Amended and Restated Certificate of Incorporation to be signed by its Chairman and Chief Executive Officer this day of , 2015.

ADURO BIOTECH, INC.

By: _____

Stephen T. Isaacs
Chairman and Chief Executive Officer

AMENDED AND RESTATED BYLAWS

OF

ADURO BIOTECH, INC.
(A DELAWARE CORPORATION)

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AMENDED AND RESTATED BYLAWS

OF

ADURO BIOTECH, INC.
(A DELAWARE CORPORATION)

ARTICLE I

OFFICES

Section 1. Registered Office. The registered office of the corporation in the State of Delaware shall be in the City of Wilmington, County of New Castle.

Section 2. Other Offices. The corporation shall also have and maintain an office or principal place of business at such place as may be fixed by the Board of Directors, and may also have offices at such other places, both within and without the State of Delaware as the Board of Directors may from time to time determine or the business of the corporation may require.

ARTICLE II

CORPORATE SEAL

Section 3. Corporate Seal. The Board of Directors may adopt a corporate seal. The corporate seal shall consist of a die bearing the name of the corporation and the inscription, "Corporate Seal-Delaware." Said seal may be used by causing it or a facsimile thereof to be impressed or affixed or reproduced or otherwise.

ARTICLE III

STOCKHOLDERS' MEETINGS

Section 4. Place Of Meetings. Meetings of the stockholders of the corporation may be held at such place, either within or without the State of Delaware, as may be determined from time to time by the Board of Directors. The Board of Directors may, in its sole discretion, determine that the meeting shall not be held at any place, but may instead be held solely by means of remote communication as provided under the Delaware General Corporation Law ("***DGCL***").

Section 5. Annual Meetings.

(a) The annual meeting of the stockholders of the corporation, for the purpose of election of directors and for such other business as may properly come before it, shall be held on such date and at such time as may be designated from time to time by the Board of Directors. Nominations of persons for election to the Board of Directors of the corporation and the proposal of business to be considered by the stockholders may be made at an annual meeting of

stockholders: (i) pursuant to the corporation's notice of meeting of stockholders (with respect to business other than nominations); (ii) brought specifically by or at the direction of the Board of Directors; or (iii) by any stockholder of the corporation who was a stockholder of record at the time of giving the stockholder's notice provided for in Section 5(b) below, who is entitled to vote at the meeting and who complied with the notice procedures set forth in Section 5. For the avoidance of doubt, clause (iii) above shall be the exclusive means for a stockholder to make nominations and submit other business (other than matters properly included in the corporation's notice of meeting of stockholders and proxy statement under Rule 14a-8 under the Securities Exchange Act of 1934, as amended, and the rules and regulations thereunder (the "***1934 Act***")) before an annual meeting of stockholders.

(b) At an annual meeting of the stockholders, only such business shall be conducted as is a proper matter for stockholder action under Delaware law and as shall have been properly brought before the meeting.

(i) For nominations for the election to the Board of Directors to be properly brought before an annual meeting by a stockholder pursuant to clause (iii) of Section 5(a) of these Bylaws, the stockholder must deliver written notice to the Secretary at the principal executive offices of the corporation on a timely basis as set forth in Section 5(b)(iii) and must update and supplement such written notice on a timely basis as set forth in Section 5(c). Such stockholder's notice shall set forth: (A) as to each nominee such stockholder proposes to nominate at the meeting: (1) the name, age, business address and residence address of such nominee, (2) the principal occupation or employment of such nominee, (3) the class and number of shares of each class of capital stock of the corporation which are owned of record and beneficially by such nominee, (4) the date or dates on which such shares were acquired and the investment intent of such acquisition, (5) a statement whether such nominee, if elected, intends to tender, promptly following such person's failure to receive the required vote for election or re-election at the next meeting at which such person would face election or re-election, an irrevocable resignation effective upon acceptance of such resignation by the Board of Directors, and (6) such other information concerning such nominee as would be required to be disclosed in a proxy statement soliciting proxies for the election of such nominee as a director in an election contest (even if an election contest is not involved), or that is otherwise required to be disclosed pursuant to Section 14 of the 1934 Act and the rules and regulations promulgated thereunder (including such person's written consent to being named as a nominee and to serving as a director if elected); and (B) the information required by Section 5(b)(iv). The corporation may require any proposed nominee to furnish such other information as it may reasonably require to determine the eligibility of such proposed nominee to serve as an independent director of the corporation or that could be material to a reasonable stockholder's understanding of the independence, or lack thereof, of such proposed nominee.

(ii) Other than proposals sought to be included in the corporation's proxy materials pursuant to Rule 14(a)-8 under the 1934 Act, for business other than nominations for the election to the Board of Directors to be properly brought before an annual meeting by a stockholder pursuant to clause (iii) of Section 5(a) of these Bylaws, the stockholder must deliver written notice to the Secretary at the principal executive offices of the corporation on a timely basis as set forth in Section 5(b)(iii), and must update and supplement such written notice on a timely basis as set forth in Section 5(c). Such stockholder's notice shall set forth: (A)

as to each matter such stockholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting, and any material interest (including any anticipated benefit of such business to any Proponent (as defined below) other than solely as a result of its ownership of the corporation's capital stock, that is material to any Proponent individually, or to the Proponents in the aggregate) in such business of any Proponent; and (B) the information required by Section 5(b)(iv).

(iii) To be timely, the written notice required by Section 5(b)(i) or 5(b)(ii) must be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the ninetieth (90th) day nor earlier than the close of business on the one hundred twentieth (120th) day prior to the first anniversary of the preceding year's annual meeting; *provided, however,* that, subject to the last sentence of this Section 5(b)(iii), in the event that the date of the annual meeting is advanced more than thirty (30) days prior to or delayed by more than thirty (30) days after the anniversary of the preceding year's annual meeting, notice by the stockholder to be timely must be so received not earlier than the close of business on the one hundred twentieth (120th) day prior to such annual meeting and not later than the close of business on the later of the ninetieth (90th) day prior to such annual meeting or the tenth (10th) day following the day on which public announcement of the date of such meeting is first made. In no event shall an adjournment or a postponement of an annual meeting for which notice has been given, or the public announcement thereof has been made, commence a new time period for the giving of a stockholder's notice as described above.

(iv) The written notice required by Section 5(b)(i) or 5(b)(ii) shall also set forth, as of the date of the notice and as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the nomination or proposal is made (each, a "***Proponent***" and collectively, the "***Proponents***"): (A) the name and address of each Proponent, as they appear on the corporation's books; (B) the class, series and number of shares of the corporation that are owned beneficially and of record by each Proponent; (C) a description of any agreement, arrangement or understanding (whether oral or in writing) with respect to such nomination or proposal between or among any Proponent and any of its affiliates or associates, and any others (including their names) acting in concert, or otherwise under the agreement, arrangement or understanding, with any of the foregoing; (D) a representation that the Proponents are holders of record or beneficial owners, as the case may be, of shares of the corporation entitled to vote at the meeting and intend to appear in person or by proxy at the meeting to nominate the person or persons specified in the notice (with respect to a notice under Section 5(b)(i)) or to propose the business that is specified in the notice (with respect to a notice under Section 5(b)(ii)); (E) a representation as to whether the Proponents intend to deliver a proxy statement and form of proxy to holders of a sufficient number of holders of the corporation's voting shares to elect such nominee or nominees (with respect to a notice under Section 5(b)(i)) or to carry such proposal (with respect to a notice under Section 5(b)(ii)); (F) to the extent known by any Proponent, the name and address of any other stockholder supporting the proposal on the date of such stockholder's notice; and (G) a description of all Derivative Transactions (as defined below) by each Proponent during the previous twelve (12) month period, including the date of the transactions and the class, series and number of securities involved in, and the material economic terms of, such Derivative Transactions.

For purposes of Sections 5 and 6, a "***Derivative Transaction***" means any agreement, arrangement, interest or understanding entered into by, or on behalf or for the benefit of, any Proponent or any of its affiliates or associates, whether record or beneficial:

(w) the value of which is derived in whole or in part from the value of any class or series of shares or other securities of the corporation,

(x) which otherwise provides any direct or indirect opportunity to gain or share in any gain derived from a change in the value of securities of the corporation,

(y) the effect or intent of which is to mitigate loss, manage risk or benefit of security value or price changes, or

(z) which provides the right to vote or increase or decrease the voting power of, such Proponent, or any of its affiliates or associates, with respect to any securities of the corporation,

which agreement, arrangement, interest or understanding may include, without limitation, any option, warrant, debt position, note, bond, convertible security, swap, stock appreciation right, short position, profit interest, hedge, right to dividends, voting agreement, performance-related fee or arrangement to borrow or lend shares (whether or not subject to payment, settlement, exercise or conversion in any such class or series), and any proportionate interest of such Proponent in the securities of the corporation held by any general or limited partnership, or any limited liability company, of which such Proponent is, directly or indirectly, a general partner or managing member.

(c) A stockholder providing written notice required by Section 5(b)(i) or (ii) shall update and supplement such notice in writing, if necessary, so that the information provided or required to be provided in such notice is true and correct in all material respects as of (i) the record date for the meeting and (ii) the date that is five (5) business days prior to the meeting and, in the event of any adjournment or postponement thereof, five (5) business days prior to such adjourned or postponed meeting. In the case of an update and supplement pursuant to clause (i) of this Section 5(c), such update and supplement shall be received by the Secretary at the principal executive offices of the corporation not later than five (5) business days after the record date for the meeting. In the case of an update and supplement pursuant to clause (ii) of this Section 5(c), such update and supplement shall be received by the Secretary at the principal executive offices of the corporation not later than two (2) business days prior to the date for the meeting, and, in the event of any adjournment or postponement thereof, two (2) business days prior to such adjourned or postponed meeting.

(d) Notwithstanding anything in Section 5(b)(iii) to the contrary, in the event that the number of directors in an Expiring Class is increased and there is no public announcement of the appointment of a director to such class, or, if no appointment was made, of the vacancy in such class, made by the corporation at least ten (10) days before the last day a stockholder may deliver a notice of nomination in accordance with Section 5(b)(iii), a stockholder's notice required by this Section 5 and which complies with the requirements in Section 5(b)(i), other than the timing requirements in Section 5(b)(iii), shall also be considered

timely, but only with respect to nominees for any new positions in such Expiring Class created by such increase, if it shall be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the tenth (10th) day following the day on which such public announcement is first made by the corporation. For purposes of this section, an "***Expiring Class***" shall mean a class of directors whose term shall expire at the next annual meeting of stockholders.

(e) A person shall not be eligible for election or re-election as a director unless the person is nominated either in accordance with clause (ii) of Section 5(a), or in accordance with clause (iii) of Section 5(a). Except as otherwise required by law, the chairperson of the meeting shall have the power and duty to determine whether a nomination or any business proposed to be brought before the meeting was made, or proposed, as the case may be, in accordance with the procedures set forth in these Bylaws and, if any proposed nomination or business is not in compliance with these Bylaws, or the Proponent does not act in accordance with the representations in Sections 5(b)(iv)(D) and 5(b)(iv)(E), to declare that such proposal or nomination shall not be presented for stockholder action at the meeting and shall be disregarded, notwithstanding that proxies in respect of such nominations or such business may have been solicited or received.

(f) Notwithstanding the foregoing provisions of this Section 5, in order to include information with respect to a stockholder proposal in the proxy statement and form of proxy for a stockholders' meeting, a stockholder must also comply with all applicable requirements of the 1934 Act and the rules and regulations thereunder. Nothing in these Bylaws shall be deemed to affect any rights of stockholders to request inclusion of proposals in the corporation's proxy statement pursuant to Rule 14a-8 under the 1934 Act; provided, however, that any references in these Bylaws to the 1934 Act or the rules and regulations thereunder are not intended to and shall not limit the requirements applicable to proposals and/or nominations to be considered pursuant to Section 5(a)(iii) of these Bylaws.

(g) For purposes of Sections 5 and 6,

(i) "***public announcement***" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the corporation with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the 1934 Act; and

(ii) "***affiliates***" and "***associates***" shall have the meanings set forth in Rule 405 under the Securities Act of 1933, as amended (the "***1933 Act***").

Section 6. Special Meetings.

(a) Special meetings of the stockholders of the corporation may be called, for any purpose as is a proper matter for stockholder action under Delaware law, by (i) the Chairperson of the Board of Directors, (ii) the Chief Executive Officer, or (iii) the Board of Directors pursuant to a resolution adopted by a majority of the total number of authorized directors (whether or not there exist any vacancies in previously authorized directorships at the time any such resolution is presented to the Board of Directors for adoption).

(b) The Board of Directors shall determine the time and place, if any, of such special meeting. Upon determination of the time and place, if any, of the meeting, the Secretary shall cause a notice of meeting to be given to the stockholders entitled to vote, in accordance with the provisions of Section 7 of these Bylaws. No business may be transacted at such special meeting otherwise than specified in the notice of meeting.

(c) Nominations of persons for election to the Board of Directors may be made at a special meeting of stockholders at which directors are to be elected (i) by or at the direction of the Board of Directors or (ii) by any stockholder of the corporation who is a stockholder of record at the time of giving notice provided for in this paragraph, who shall be entitled to vote at the meeting and who delivers written notice to the Secretary of the corporation setting forth the information required by Section 5(b)(i). In the event the corporation calls a special meeting of stockholders for the purpose of electing one or more directors to the Board of Directors, any such stockholder of record may nominate a person or persons (as the case may be), for election to such position(s) as specified in the corporation's notice of meeting, if written notice setting forth the information required by Section 5(b)(i) of these Bylaws shall be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the later of the ninetieth (90th) day prior to such meeting or the tenth (10th) day following the day on which public announcement is first made of the date of the special meeting and of the nominees proposed by the Board of Directors to be elected at such meeting. The stockholder shall also update and supplement such information as required under Section 5(c). In no event shall an adjournment or a postponement of a special meeting for which notice has been given, or the public announcement thereof has been made, commence a new time period for the giving of a stockholder's notice as described above.

(d) Notwithstanding the foregoing provisions of this Section 6, a stockholder must also comply with all applicable requirements of the 1934 Act and the rules and regulations thereunder with respect to matters set forth in this Section 6. Nothing in these Bylaws shall be deemed to affect any rights of stockholders to request inclusion of proposals in the corporation's proxy statement pursuant to Rule 14a-8 under the 1934 Act; *provided, however,* that any references in these Bylaws to the 1934 Act or the rules and regulations thereunder are not intended to and shall not limit the requirements applicable to nominations for the election to the Board of Directors to be considered pursuant to Section 6(c) of these Bylaws.

Section 7. Notice Of Meetings. Except as otherwise provided by law, notice, given in writing or by electronic transmission, of each meeting of stockholders shall be given not less than ten (10) nor more than sixty (60) days before the date of the meeting to each stockholder entitled to vote at such meeting, such notice to specify the place, if any, date and hour, in the case of special meetings, the purpose or purposes of the meeting, and the means of remote communications, if any, by which stockholders and proxy holders may be deemed to be present in person and vote at any such meeting. If mailed, notice is given when deposited in the United States mail, postage prepaid, directed to the stockholder at such stockholder's address as it appears on the records of the corporation. Notice of the time, place, if any, and purpose of any meeting of stockholders may be waived in writing, signed by the person entitled to notice thereof, or by electronic transmission by such person, either before or after such meeting, and will be waived by any stockholder by his attendance thereat in person, by remote communication, if applicable, or by proxy, except when the stockholder attends a meeting for the

express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Any stockholder so waiving notice of such meeting shall be bound by the proceedings of any such meeting in all respects as if due notice thereof had been given.

Section 8. Quorum. At all meetings of stockholders, except where otherwise provided by statute or by the Certificate of Incorporation, or by these Bylaws, the presence, in person, by remote communication, if applicable, or by proxy duly authorized, of the holders of a majority of the outstanding shares of stock entitled to vote shall constitute a quorum for the transaction of business. In the absence of a quorum, any meeting of stockholders may be adjourned, from time to time, either by the chairperson of the meeting or by vote of the holders of a majority of the shares represented thereat, but no other business shall be transacted at such meeting. The stockholders present at a duly called or convened meeting, at which a quorum is present, may continue to transact business until adjournment, notwithstanding the withdrawal of enough stockholders to leave less than a quorum. Except as otherwise provided by statute or by applicable stock exchange rules, or by the Certificate of Incorporation or these Bylaws, in all matters other than the election of directors, the affirmative vote of the majority of shares present in person, by remote communication, if applicable, or represented by proxy at the meeting and entitled to vote generally on the subject matter shall be the act of the stockholders. Except as otherwise provided by statute, the Certificate of Incorporation or these Bylaws, directors shall be elected by a plurality of the votes of the shares present in person, by remote communication, if applicable, or represented by proxy at the meeting and entitled to vote generally on the election of directors. Where a separate vote by a class or classes or series is required, except where otherwise provided by the statute or by the Certificate of Incorporation or these Bylaws, a majority of the outstanding shares of such class or classes or series, present in person, by remote communication, if applicable, or represented by proxy duly authorized, shall constitute a quorum entitled to take action with respect to that vote on that matter. Except where otherwise provided by statute or by the Certificate of Incorporation or these Bylaws, the affirmative vote of the majority (plurality, in the case of the election of directors) of shares of such class or classes or series present in person, by remote communication, if applicable, or represented by proxy at the meeting shall be the act of such class or classes or series.

Section 9. Adjournment And Notice Of Adjourned Meetings. Any meeting of stockholders, whether annual or special, may be adjourned from time to time either by the chairperson of the meeting or by the vote of a majority of the shares present in person, by remote communication, if applicable, or represented by proxy at the meeting. When a meeting is adjourned to another time or place, if any, notice need not be given of the adjourned meeting if the time and place, if any, thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting, the corporation may transact any business which might have been transacted at the original meeting. If the adjournment is for more than thirty (30) days or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

Section 10. Voting Rights. For the purpose of determining those stockholders entitled to vote at any meeting of the stockholders, except as otherwise provided by law, only persons in whose names shares stand on the stock records of the corporation on the record date, as provided in Section 12 of these Bylaws, shall be entitled to vote at any meeting of stockholders. Every

person entitled to vote shall have the right to do so either in person, by remote communication, if applicable, or by an agent or agents authorized by a proxy granted in accordance with Delaware law. An agent so appointed need not be a stockholder. No proxy shall be voted after three (3) years from its date of creation unless the proxy provides for a longer period.

Section 11. Joint Owners Of Stock. If shares or other securities having voting power stand of record in the names of two (2) or more persons, whether fiduciaries, members of a partnership, joint tenants, tenants in common, tenants by the entirety, or otherwise, or if two (2) or more persons have the same fiduciary relationship respecting the same shares, unless the Secretary is given written notice to the contrary and is furnished with a copy of the instrument or order appointing them or creating the relationship wherein it is so provided, their acts with respect to voting shall have the following effect: (a) if only one (1) votes, his act binds all; (b) if more than one (1) votes, the act of the majority so voting binds all; (c) if more than one (1) votes, but the vote is evenly split on any particular matter, each faction may vote the securities in question proportionally, or may apply to the Delaware Court of Chancery for relief as provided in the DGCL, Section 217(b). If the instrument filed with the Secretary shows that any such tenancy is held in unequal interests, a majority or even-split for the purpose of subsection (c) shall be a majority or even-split in interest.

Section 12. List Of Stockholders. The Secretary shall prepare and make, at least ten (10) days before every meeting of stockholders, a complete list of the stockholders entitled to vote at said meeting, arranged in alphabetical order, showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, (a) on a reasonably accessible electronic network, provided that the information required to gain access to such list is provided with the notice of the meeting, or (b) during ordinary business hours, at the principal place of business of the corporation. In the event that the corporation determines to make the list available on an electronic network, the corporation may take reasonable steps to ensure that such information is available only to stockholders of the corporation. The list shall be open to examination of any stockholder during the time of the meeting as provided by law.

Section 13. Action Without Meeting. No action shall be taken by the stockholders except at an annual or special meeting of stockholders called in accordance with these Bylaws, and no action shall be taken by the stockholders by written consent or by electronic transmission.

Section 14. Organization.

(a) At every meeting of stockholders, the Chairperson of the Board of Directors, or, if a Chairperson has not been appointed or is absent, the Chief Executive Officer, or if no Chief Executive Officer is then serving or is absent, the President, or, if the President is absent, a chairperson of the meeting chosen by a majority in interest of the stockholders entitled to vote, present in person or by proxy, shall act as chairperson. The Chairperson of the Board may appoint the Chief Executive Officer as chairperson of the meeting. The Secretary, or, in his or her absence, an Assistant Secretary or other officer or other person directed to do so by the chairperson of the meeting, shall act as secretary of the meeting.

(b) The Board of Directors of the corporation shall be entitled to make such rules or regulations for the conduct of meetings of stockholders as it shall deem necessary, appropriate or convenient. Subject to such rules and regulations of the Board of Directors, if any, the chairperson of the meeting shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairperson, are necessary, appropriate or convenient for the proper conduct of the meeting, including, without limitation, establishing an agenda or order of business for the meeting, rules and procedures for maintaining order at the meeting and the safety of those present, limitations on participation in such meeting to stockholders of record of the corporation and their duly authorized and constituted proxies and such other persons as the chairperson shall permit, restrictions on entry to the meeting after the time fixed for the commencement thereof, limitations on the time allotted to questions or comments by participants and regulation of the opening and closing of the polls for balloting on matters which are to be voted on by ballot. The date and time of the opening and closing of the polls for each matter upon which the stockholders will vote at the meeting shall be announced at the meeting. Unless and to the extent determined by the Board of Directors or the chairperson of the meeting, meetings of stockholders shall not be required to be held in accordance with rules of parliamentary procedure.

ARTICLE IV

DIRECTORS

Section 15. Number And Term Of Office. The authorized number of directors of the corporation shall be fixed in accordance with the Certificate of Incorporation. Directors need not be stockholders unless so required by the Certificate of Incorporation. If for any cause, the directors shall not have been elected at an annual meeting, they may be elected as soon thereafter as convenient at a special meeting of the stockholders called for that purpose in the manner provided in these Bylaws.

Section 16. Powers. The powers of the corporation shall be exercised, its business conducted and its property controlled by the Board of Directors, except as may be otherwise provided by statute or by the Certificate of Incorporation.

Section 17. Classes of Directors. Subject to the rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances, following the closing of the initial public offering pursuant to an effective registration statement under the 1933 Act, covering the offer and sale of Common Stock of the corporation to the public (the "***Initial Public Offering***"), the directors shall be divided into three classes designated as Class I, Class II and Class III, respectively. The Board of Directors is authorized to assign members of the Board of Directors already in office to such classes at the time the classification becomes effective. At the first annual meeting of stockholders following the closing of the Initial Public Offering, the term of office of the Class I directors shall expire and Class I directors shall be elected for a full term of three years. At the second annual meeting of stockholders following the Initial Public Offering, the term of office of the Class II directors shall expire and Class II directors shall be elected for a full term of three years. At the third annual meeting of stockholders following the Initial Public Offering, the term of office of the Class III directors shall expire and Class III directors shall be elected for a full term of three years. At each succeeding annual meeting of stockholders, directors shall be elected for a full term of three years to succeed the directors of the class whose terms expire at such annual meeting.

Notwithstanding the foregoing provisions of this Section 17, each director shall serve until his successor is duly elected and qualified or until his earlier death, resignation or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

Section 18. Vacancies. Unless otherwise provided in the Certificate of Incorporation, and subject to the rights of the holders of any series of Preferred Stock or as otherwise provided by applicable law, any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal or other causes and any newly created directorships resulting from any increase in the number of directors shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by stockholders, be filled only by the affirmative vote of a majority of the directors then in office, even though less than a quorum of the Board of Directors, or by a sole remaining director, and not by the stockholders, *provided, however*, that whenever the holders of any class or classes of stock or series thereof are entitled to elect one or more directors by the provisions of the Certificate of Incorporation, vacancies and newly created directorships of such class or classes or series shall, unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by stockholders, be filled by a majority of the directors elected by such class or classes or series thereof then in office, or by a sole remaining director so elected, and not by the stockholders. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the director for which the vacancy was created or occurred and until such director's successor shall have been elected and qualified. A vacancy in the Board of Directors shall be deemed to exist under this Bylaw in the case of the death, removal or resignation of any director.

Section 19. Resignation. Any director may resign at any time by delivering his or her notice in writing or by electronic transmission to the Secretary, such resignation to specify whether it will be effective at a particular time. If no such specification is made, the Secretary, in his or her discretion, may either (a) require confirmation from the director prior to deeming the resignation effective, in which case the resignation will be deemed effective upon receipt of such confirmation, or (b) deem the resignation effective at the time of delivery of the resignation to the Secretary. When one or more directors shall resign from the Board of Directors, effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective, and each Director so chosen shall hold office for the unexpired portion of the term of the Director whose place shall be vacated and until his successor shall have been duly elected and qualified.

Section 20. Removal.

(a) Subject to the rights of holders of any series of Preferred Stock to elect additional directors under specified circumstances, neither the Board of Directors nor any individual director may be removed without cause.

(b) Subject to any limitation imposed by law, any individual director or directors may be removed with cause by the affirmative vote of the holders of at least sixty-six and two-thirds percent (66 2/3%) of the voting power of all then outstanding shares of capital stock of the corporation entitled to vote generally at an election of directors, voting together as a single class.

Section 21. Meetings.

(a) Regular Meetings. Unless otherwise restricted by the Certificate of Incorporation, regular meetings of the Board of Directors may be held at any time or date and at any place within or without the State of Delaware which has been designated by the Board of Directors and publicized among all directors, either orally or in writing, by telephone, including a voice-messaging system or other system designed to record and communicate messages, facsimile, telegraph or telex, or by electronic mail or other electronic means. No further notice shall be required for regular meetings of the Board of Directors.

(b) Special Meetings. Unless otherwise restricted by the Certificate of Incorporation, special meetings of the Board of Directors may be held at any time and place within or without the State of Delaware whenever called by the Chairperson of the Board, the Chief Executive Officer or a majority of the total number of authorized directors.

(c) Meetings by Electronic Communications Equipment. Any member of the Board of Directors, or of any committee thereof, may participate in a meeting by means of conference telephone or other communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting by such means shall constitute presence in person at such meeting.

(d) Notice of Special Meetings. Notice of the time and place of all special meetings of the Board of Directors shall be orally or in writing, by telephone, including a voice messaging system or other system or technology designed to record and communicate messages, facsimile, telegraph or telex, or by electronic mail or other electronic means, during normal business hours, at least twenty-four (24) hours before the date and time of the meeting. If notice is sent by US mail, it shall be sent by first class mail, charges prepaid, at least three (3) days before the date of the meeting. Notice of any meeting may be waived in writing, or by electronic transmission, at any time before or after the meeting and will be waived by any director by attendance thereat, except when the director attends the meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened.

(e) Waiver of Notice. The transaction of all business at any meeting of the Board of Directors, or any committee thereof, however called or noticed, or wherever held, shall be as valid as though it had been transacted at a meeting duly held after regular call and notice, if a quorum be present and if, either before or after the meeting, each of the directors not present who did not receive notice shall sign a written waiver of notice or shall waive notice by electronic transmission. All such waivers shall be filed with the corporate records or made a part of the minutes of the meeting.

Section 22. Quorum And Voting.

(a) Unless the Certificate of Incorporation requires a greater number, and except with respect to questions related to indemnification arising under Section 45 for which a quorum shall be one-third of the exact number of directors fixed from time to time, a quorum of the Board of Directors shall consist of a majority of the exact number of directors fixed from time to time by the Board of Directors in accordance with the Certificate of Incorporation; *provided, however,* at any meeting whether a quorum be present or otherwise, a majority of the directors present may adjourn from time to time until the time fixed for the next regular meeting of the Board of Directors, without notice other than by announcement at the meeting.

(b) At each meeting of the Board of Directors at which a quorum is present, all questions and business shall be determined by the affirmative vote of a majority of the directors present, unless a different vote be required by law, the Certificate of Incorporation or these Bylaws.

Section 23. Action Without Meeting. Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof may be taken without a meeting, if all members of the Board of Directors or committee, as the case may be, consent thereto in writing or by electronic transmission, and such writing or writings or transmission or transmissions are filed with the minutes of proceedings of the Board of Directors or committee. Such filing shall be in paper form if the minutes are maintained in paper form and shall be in electronic form if the minutes are maintained in electronic form.

Section 24. Fees And Compensation. Directors shall be entitled to such compensation for their services as may be approved by the Board of Directors, including, if so approved, by resolution of the Board of Directors, a fixed sum and expenses of attendance, if any, for attendance at each regular or special meeting of the Board of Directors and at any meeting of a committee of the Board of Directors. Nothing herein contained shall be construed to preclude any director from serving the corporation in any other capacity as an officer, agent, employee, or otherwise and receiving compensation therefor.

Section 25. Committees.

(a) Executive Committee. The Board of Directors may appoint an Executive Committee to consist of one (1) or more members of the Board of Directors. The Executive Committee, to the extent permitted by law and provided in the resolution of the Board of Directors shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the corporation, and may authorize the seal of the corporation to be affixed to all papers which may require it; but no such committee shall have the power or authority in reference to (i) approving or adopting, or recommending to the stockholders, any action or matter (other than the election or removal of directors) expressly required by the DGCL to be submitted to stockholders for approval, or (ii) adopting, amending or repealing any Bylaw of the corporation.

(b) Other Committees. The Board of Directors may, from time to time, appoint such other committees as may be permitted by law. Such other committees appointed by the Board of Directors shall consist of one (1) or more members of the Board of Directors and shall have such powers and perform such duties as may be prescribed by the resolution or resolutions creating such committees, but in no event shall any such committee have the powers denied to the Executive Committee in these Bylaws.

(c) Term. The Board of Directors, subject to any requirements of any outstanding series of Preferred Stock and the provisions of subsections (a) or (b) of this Section 25, may at any time increase or decrease the number of members of a committee or terminate the existence of a committee. The membership of a committee member shall terminate on the date of his death or voluntary resignation from the committee or from the Board of Directors. The Board of Directors may at any time for any reason remove any individual committee member and the Board of Directors may fill any committee vacancy created by death, resignation, removal or increase in the number of members of the committee. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee, and, in addition, in the absence or disqualification of any member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member.

(d) Meetings. Unless the Board of Directors shall otherwise provide, regular meetings of the Executive Committee or any other committee appointed pursuant to this Section 25 shall be held at such times and places as are determined by the Board of Directors, or by any such committee, and when notice thereof has been given to each member of such committee, no further notice of such regular meetings need be given thereafter. Special meetings of any such committee may be held at any place which has been determined from time to time by such committee, and may be called by any Director who is a member of such committee, upon notice to the members of such committee of the time and place of such special meeting given in the manner provided for the giving of notice to members of the Board of Directors of the time and place of special meetings of the Board of Directors. Notice of any special meeting of any committee may be waived in writing or by electronic transmission at any time before or after the meeting and will be waived by any director by attendance thereat, except when the director attends such special meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Unless otherwise provided by the Board of Directors in the resolutions authorizing the creation of the committee, a majority of the authorized number of members of any such committee shall constitute a quorum for the transaction of business, and the act of a majority of those present at any meeting at which a quorum is present shall be the act of such committee.

Section 26. Duties of Chairperson of the Board of Directors. The Chairperson of the Board of Directors, if appointed and when present, shall preside at all meetings of the stockholders and the Board of Directors. The Chairperson of the Board of Directors shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

Section 27. Organization. At every meeting of the directors, the Chairperson of the Board of Directors, or, if a Chairperson has not been appointed or is absent, the Chief Executive Officer (if a director), or, if a Chief Executive Officer is absent, the President (if a director), or if the President is absent, the most senior Vice President (if a director), or, in the absence of any such person, a chairperson of the meeting chosen by a majority of the directors present, shall preside over the meeting. The Secretary, or in his absence, any Assistant Secretary or other officer, director or other person directed to do so by the person presiding over the meeting, shall act as secretary of the meeting.

ARTICLE V

OFFICERS

Section 28. Officers Designated. The officers of the corporation shall include, if and when designated by the Board of Directors, the Chief Executive Officer, the President, one or more Vice Presidents, the Secretary, the Chief Financial Officer and the Treasurer. The Board of Directors may also appoint one or more Assistant Secretaries and Assistant Treasurers and such other officers and agents with such powers and duties as it shall deem necessary. The Board of Directors may assign such additional titles to one or more of the officers as it shall deem appropriate. Any one person may hold any number of offices of the corporation at any one time unless specifically prohibited therefrom by law. The salaries and other compensation of the officers of the corporation shall be fixed by or in the manner designated by the Board of Directors.

Section 29. Tenure And Duties Of Officers.

(a) General. All officers shall hold office at the pleasure of the Board of Directors and until their successors shall have been duly elected and qualified, unless sooner removed. Any officer elected or appointed by the Board of Directors may be removed at any time by the Board of Directors. If the office of any officer becomes vacant for any reason, the vacancy may be filled by the Board of Directors.

(b) Duties of Chief Executive Officer. The Chief Executive Officer shall preside at all meetings of the stockholders and at all meetings of the Board of Directors (if a director), unless the Chairperson of the Board of Directors has been appointed and is present. Unless an officer has been appointed Chief Executive Officer of the corporation, the President shall be the chief executive officer of the corporation and shall, subject to the control of the Board of Directors, have general supervision, direction and control of the business and officers of the corporation. To the extent that a Chief Executive Officer has been appointed and no President has been appointed, all references in these Bylaws to the President shall be deemed references to the Chief Executive Officer. The Chief Executive Officer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

(c) Duties of President. The President shall preside at all meetings of the stockholders and at all meetings of the Board of Directors (if a director), unless the Chairperson of the Board of Directors or the Chief Executive Officer has been appointed and is present.

Unless another officer has been appointed Chief Executive Officer of the corporation, the President shall be the chief executive officer of the corporation and shall, subject to the control of the Board of Directors, have general supervision, direction and control of the business and officers of the corporation. The President shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time.

(d) Duties of Vice Presidents. A Vice President may assume and perform the duties of the President in the absence or disability of the President or whenever the office of President is vacant. A Vice President shall perform other duties commonly incident to their office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer, or, if the Chief Executive Officer has not been appointed or is absent, the President shall designate from time to time.

(e) Duties of Secretary. The Secretary shall attend all meetings of the stockholders and of the Board of Directors and shall record all acts and proceedings thereof in the minute book of the corporation. The Secretary shall give notice in conformity with these Bylaws of all meetings of the stockholders and of all meetings of the Board of Directors and any committee thereof requiring notice. The Secretary shall perform all other duties provided for in these Bylaws and other duties commonly incident to the office and shall also perform such other duties and have such other powers, as the Board of Directors shall designate from time to time. The Chief Executive Officer, or if no Chief Executive Officer is then serving, the President may direct any Assistant Secretary or other officer to assume and perform the duties of the Secretary in the absence or disability of the Secretary, and each Assistant Secretary shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer, or if no Chief Executive Officer is then serving, the President shall designate from time to time.

(f) Duties of Chief Financial Officer. The Chief Financial Officer shall keep or cause to be kept the books of account of the corporation in a thorough and proper manner and shall render statements of the financial affairs of the corporation in such form and as often as required by the Board of Directors or the Chief Executive Officer, or if no Chief Executive Officer is then serving, the President. The Chief Financial Officer, subject to the order of the Board of Directors, shall have the custody of all funds and securities of the corporation. The Chief Financial Officer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer, or if no Chief Executive Officer is then serving, the President shall designate from time to time. To the extent that a Chief Financial Officer has been appointed and no Treasurer has been appointed, all references in these Bylaws to the Treasurer shall be deemed references to the Chief Financial Officer. The President may direct the Treasurer, if any, or any Assistant Treasurer, or the controller or any assistant controller to assume and perform the duties of the Chief Financial Officer in the absence or disability of the Chief Financial Officer, and each Treasurer and Assistant Treasurer and each controller and assistant controller shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer, or if no Chief Executive Officer is then serving, the President shall designate from time to time.

(g) Duties of Treasurer. Unless another officer has been appointed Chief Financial Officer of the corporation, the Treasurer shall be the chief financial officer of the corporation and shall keep or cause to be kept the books of account of the corporation in a thorough and proper manner and shall render statements of the financial affairs of the corporation in such form and as often as required by the Board of Directors or the Chief Executive Officer, or if no Chief Executive Officer is then serving, the President, and, subject to the order of the Board of Directors, shall have the custody of all funds and securities of the corporation. The Treasurer shall perform other duties commonly incident to the office and shall also perform such other duties and have such other powers as the Board of Directors or the Chief Executive Officer, or if no Chief Executive Officer is then serving, the President and Chief Financial Officer (if not Treasurer) shall designate from time to time.

Section 30. Delegation Of Authority. The Board of Directors may from time to time delegate the powers or duties of any officer to any other officer or agent, notwithstanding any provision hereof.

Section 31. Resignations. Any officer may resign at any time by giving notice in writing or by electronic transmission to the Board of Directors or to the Chief Executive Officer, or if no Chief Executive Officer is then serving, the President or to the Secretary. Any such resignation shall be effective when received by the person or persons to whom such notice is given, unless a later time is specified therein, in which event the resignation shall become effective at such later time. Unless otherwise specified in such notice, the acceptance of any such resignation shall not be necessary to make it effective. Any resignation shall be without prejudice to the rights, if any, of the corporation under any contract with the resigning officer.

Section 32. Removal. Any officer may be removed from office at any time, either with or without cause, by the affirmative vote of a majority of the directors in office at the time, or by the unanimous written consent of the directors in office at the time, or by any committee or by the Chief Executive Officer or by other superior officers upon whom such power of removal may have been conferred by the Board of Directors.

ARTICLE VI

EXECUTION OF CORPORATE INSTRUMENTS AND VOTING OF SECURITIES OWNED BY THE CORPORATION

Section 33. Execution Of Corporate Instruments. The Board of Directors may, in its discretion, determine the method and designate the signatory officer or officers, or other person or persons, to execute on behalf of the corporation any corporate instrument or document, or to sign on behalf of the corporation the corporate name without limitation, or to enter into contracts on behalf of the corporation, except where otherwise provided by law or these Bylaws, and such execution or signature shall be binding upon the corporation.

All checks and drafts drawn on banks or other depositaries on funds to the credit of the corporation or in special accounts of the corporation shall be signed by such person or persons as the Board of Directors shall authorize so to do.

Unless authorized or ratified by the Board of Directors or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

Section 34. Voting Of Securities Owned By The Corporation. All stock and other securities of other corporations owned or held by the corporation for itself, or for other parties in any capacity, shall be voted, and all proxies with respect thereto shall be executed, by the person authorized so to do by resolution of the Board of Directors, or, in the absence of such authorization, by the Chairperson of the Board of Directors, the Chief Executive Officer, the President, or any Vice President.

ARTICLE VII

SHARES OF STOCK

Section 35. Form And Execution Of Certificates. The shares of the corporation shall be represented by certificates, or shall be uncertificated if so provided by resolution or resolutions of the Board of Directors. Certificates for the shares of stock, if any, shall be in such form as is consistent with the Certificate of Incorporation and applicable law. Every holder of stock in the corporation represented by certificate shall be entitled to have a certificate signed by or in the name of the corporation by the Chairperson of the Board of Directors, or the President or any Vice President and by the Treasurer or Assistant Treasurer or the Secretary or Assistant Secretary, certifying the number of shares owned by him in the corporation. Any or all of the signatures on the certificate may be facsimiles. In case any officer, transfer agent, or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent, or registrar before such certificate is issued, it may be issued with the same effect as if he were such officer, transfer agent, or registrar at the date of issue.

Section 36. Lost Certificates. A new certificate or certificates shall be issued in place of any certificate or certificates theretofore issued by the corporation alleged to have been lost, stolen, or destroyed, upon the making of an affidavit of that fact by the person claiming the certificate of stock to be lost, stolen, or destroyed. The corporation may require, as a condition precedent to the issuance of a new certificate or certificates, the owner of such lost, stolen, or destroyed certificate or certificates, or the owner’s legal representative, to agree to indemnify the corporation in such manner as it shall require or to give the corporation a surety bond in such form and amount as it may direct as indemnity against any claim that may be made against the corporation with respect to the certificate alleged to have been lost, stolen, or destroyed.

Section 37. Transfers.

(a) Transfers of record of shares of stock of the corporation shall be made only upon its books by the holders thereof, in person or by attorney duly authorized, and, in the case of stock represented by certificate, upon the surrender of a properly endorsed certificate or certificates for a like number of shares.

(b) The corporation shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes of stock of the corporation to restrict the transfer of shares of stock of the corporation of any one or more classes owned by such stockholders in any manner not prohibited by the DGCL.

Section 38. Fixing Record Dates.

(a) In order that the corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof, the Board of Directors may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted by the Board of Directors, and which record date shall, subject to applicable law, not be more than sixty (60) nor less than ten (10) days before the date of such meeting. If no record date is fixed by the Board of Directors, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or if notice is waived, at the close of business on the day next preceding the day on which the meeting is held. A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

(b) In order that the corporation may determine the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which record date shall not precede the date upon which the resolution fixing the record date is adopted, and which record date shall be not more than sixty (60) days prior to such action. If no record date is fixed, the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

Section 39. Registered Stockholders. The corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends, and to vote as such owner, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

ARTICLE VIII

OTHER SECURITIES OF THE CORPORATION

Section 40. Execution Of Other Securities. All bonds, debentures and other corporate securities of the corporation, other than stock certificates (covered in Section 36), may be signed by the Chairperson of the Board of Directors, the President or any Vice President, or such other person as may be authorized by the Board of Directors, and the corporate seal impressed thereon or a facsimile of such seal imprinted thereon and attested by the signature of the Secretary or an Assistant Secretary, or the Chief Financial Officer or Treasurer or an Assistant Treasurer; *provided, however,* that where any such bond, debenture or other corporate security shall be authenticated by the manual signature, or where permissible facsimile signature, of a trustee under an indenture pursuant to which such bond, debenture or other corporate

security shall be issued, the signatures of the persons signing and attesting the corporate seal on such bond, debenture or other corporate security may be the imprinted facsimile of the signatures of such persons. Interest coupons appertaining to any such bond, debenture or other corporate security, authenticated by a trustee as aforesaid, shall be signed by the Treasurer or an Assistant Treasurer of the corporation or such other person as may be authorized by the Board of Directors, or bear imprinted thereon the facsimile signature of such person. In case any officer who shall have signed or attested any bond, debenture or other corporate security, or whose facsimile signature shall appear thereon or on any such interest coupon, shall have ceased to be such officer before the bond, debenture or other corporate security so signed or attested shall have been delivered, such bond, debenture or other corporate security nevertheless may be adopted by the corporation and issued and delivered as though the person who signed the same or whose facsimile signature shall have been used thereon had not ceased to be such officer of the corporation.

ARTICLE IX

DIVIDENDS

Section 41. Declaration Of Dividends. Dividends upon the capital stock of the corporation, subject to the provisions of the Certificate of Incorporation and applicable law, if any, may be declared by the Board of Directors pursuant to law at any regular or special meeting. Dividends may be paid in cash, in property, or in shares of the capital stock, subject to the provisions of the Certificate of Incorporation and applicable law.

Section 42. Dividend Reserve. Before payment of any dividend, there may be set aside out of any funds of the corporation available for dividends such sum or sums as the Board of Directors from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, or for equalizing dividends, or for repairing or maintaining any property of the corporation, or for such other purpose as the Board of Directors shall think conducive to the interests of the corporation, and the Board of Directors may modify or abolish any such reserve in the manner in which it was created.

ARTICLE X

FISCAL YEAR

Section 43. Fiscal Year. The fiscal year of the corporation shall be fixed by resolution of the Board of Directors.

ARTICLE XI

INDEMNIFICATION

Section 44. Indemnification of Directors, Executive Officers, Other Officers, Employees and Other Agents.

(a) Directors and executive officers. The corporation shall indemnify its directors and executive officers (for the purposes of this Article XI, "***executive officers***" shall have the meaning defined in Rule 3b-7 promulgated under the 1934 Act) to the extent not prohibited by the DGCL or any other applicable law; *provided, however,* that the corporation may modify the extent of such indemnification by individual contracts with its directors and executive officers; and, *provided, further,* that the corporation shall not be required to indemnify any director or executive officer in connection with any proceeding (or part thereof) initiated by such person unless (i) such indemnification is expressly required to be made by law, (ii) the proceeding was authorized by the Board of Directors of the corporation, (iii) such indemnification is provided by the corporation, in its sole discretion, pursuant to the powers vested in the corporation under the DGCL or any other applicable law or (iv) such indemnification is required to be made under subsection (d).

(b) Other Officers, Employees and Other Agents. The corporation shall have power to indemnify its other officers, employees and other agents as set forth in the DGCL or any other applicable law. The Board of Directors shall have the power to delegate the determination of whether indemnification shall be given to any such person except executive officers to such officers or other persons as the Board of Directors shall determine.

(c) Expenses. The corporation shall advance to any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he is or was a director or executive officer, of the corporation, or is or was serving at the request of the corporation as a director or executive officer of another corporation, partnership, joint venture, trust or other enterprise, prior to the final disposition of the proceeding, promptly following request therefor, all expenses incurred by any director or executive officer in connection with such proceeding provided, however, that if the DGCL requires, an advancement of expenses incurred by a director or executive officer in his or her capacity as a director or executive officer (and not in any other capacity in which service was or is rendered by such indemnitee, including, without limitation, service to an employee benefit plan) shall be made only upon delivery to the corporation of an undertaking (hereinafter an "***undertaking***"), by or on behalf of such indemnitee, to repay all amounts so advanced if it shall ultimately be determined by final judicial decision from which there is no further right to appeal (hereinafter a "***final adjudication***") that such indemnitee is not entitled to be indemnified for such expenses under this section or otherwise.

Notwithstanding the foregoing, unless otherwise determined pursuant to paragraph (e) of this section, no advance shall be made by the corporation to an executive officer of the corporation (except by reason of the fact that such executive officer is or was a director of the corporation in which event this paragraph shall not apply) in any action, suit or proceeding,

whether civil, criminal, administrative or investigative, if a determination is reasonably and promptly made (i) by a majority vote of directors who were not parties to the proceeding, even if not a quorum, or (ii) by a committee of such directors designated by a majority vote of such directors, even though less than a quorum, or (iii) if there are no such directors, or such directors so direct, by independent legal counsel in a written opinion, that the facts known to the decision-making party at the time such determination is made demonstrate clearly and convincingly that such person acted in bad faith or in a manner that such person did not believe to be in or not opposed to the best interests of the corporation.

(d) Enforcement. Without the necessity of entering into an express contract, all rights to indemnification and advances to directors and executive officers under this Bylaw shall be deemed to be contractual rights and be effective to the same extent and as if provided for in a contract between the corporation and the director or executive officer. Any right to indemnification or advances granted by this section to a director or executive officer shall be enforceable by or on behalf of the person holding such right in any court of competent jurisdiction if (i) the claim for indemnification or advances is denied, in whole or in part, or (ii) no disposition of such claim is made within ninety (90) days of request therefor. To the extent permitted by law, the claimant in such enforcement action, if successful in whole or in part, shall be entitled to be paid also the expense of prosecuting the claim. In connection with any claim for indemnification, the corporation shall be entitled to raise as a defense to any such action that the claimant has not met the standards of conduct that make it permissible under the DGCL or any other applicable law for the corporation to indemnify the claimant for the amount claimed. In connection with any claim by an executive officer of the corporation (except in any action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that such executive officer is or was a director of the corporation) for advances, the corporation shall be entitled to raise a defense as to any such action clear and convincing evidence that such person acted in bad faith or in a manner that such person did not believe to be in or not opposed to the best interests of the corporation, or with respect to any criminal action or proceeding that such person acted without reasonable cause to believe that his conduct was lawful. Neither the failure of the corporation (including its Board of Directors, independent legal counsel or its stockholders) to have made a determination prior to the commencement of such action that indemnification of the claimant is proper in the circumstances because he has met the applicable standard of conduct set forth in the DGCL or any other applicable law, nor an actual determination by the corporation (including its Board of Directors, independent legal counsel or its stockholders) that the claimant has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that claimant has not met the applicable standard of conduct. In any suit brought by a director or executive officer to enforce a right to indemnification or to an advancement of expenses hereunder, the burden of proving that the director or executive officer is not entitled to be indemnified, or to such advancement of expenses, under this section or otherwise shall be on the corporation.

(e) Non-Exclusivity of Rights. The rights conferred on any person by this Bylaw shall not be exclusive of any other right which such person may have or hereafter acquire under any applicable statute, provision of the Certificate of Incorporation, Bylaws, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in his official capacity and as to action in another capacity while holding office. The corporation is specifically authorized to enter into individual contracts with any or all of its directors, officers, employees or agents respecting indemnification and advances, to the fullest extent not prohibited by the DGCL, or by any other applicable law.

(f) Survival of Rights. The rights conferred on any person by this Bylaw shall continue as to a person who has ceased to be a director or executive officer or officer, employee or other agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

(g) Insurance. To the fullest extent permitted by the DGCL or any other applicable law, the corporation, upon approval by the Board of Directors, may purchase insurance on behalf of any person required or permitted to be indemnified pursuant to this section.

(h) Amendments. Any repeal or modification of this section shall only be prospective and shall not affect the rights under this Bylaw in effect at the time of the alleged occurrence of any action or omission to act that is the cause of any proceeding against any agent of the corporation.

(i) Saving Clause. If this Bylaw or any portion hereof shall be invalidated on any ground by any court of competent jurisdiction, then the corporation shall nevertheless indemnify each director and executive officer to the full extent not prohibited by any applicable portion of this section that shall not have been invalidated, or by any other applicable law. If this section shall be invalid due to the application of the indemnification provisions of another jurisdiction, then the corporation shall indemnify each director and executive officer to the full extent under any other applicable law.

(j) Certain Definitions. For the purposes of this Bylaw, the following definitions shall apply:

(i) The term "***proceeding***" shall be broadly construed and shall include, without limitation, the investigation, preparation, prosecution, defense, settlement, arbitration and appeal of, and the giving of testimony in, any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative.

(ii) The term "***expenses***" shall be broadly construed and shall include, without limitation, court costs, attorneys' fees, witness fees, fines, amounts paid in settlement or judgment and any other costs and expenses of any nature or kind incurred in connection with any proceeding.

(iii) The term the "***corporation***" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, and employees or agents, so that any person who is or was a director, officer, employee or agent of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, shall stand in the same position under the provisions of this section with respect to the resulting or surviving corporation as he would have with respect to such constituent corporation if its separate existence had continued.

(iv) References to a "***director***," "***executive officer***," "***officer***," "***employee***," or "***agent***" of the corporation shall include, without limitation, situations where such person is serving at the request of the corporation as, respectively, a director, executive officer, officer, employee, trustee or agent of another corporation, partnership, joint venture, trust or other enterprise.

(v) References to "***other enterprises***" shall include employee benefit plans; references to "***fines***" shall include any excise taxes assessed on a person with respect to an employee benefit plan; and references to "***serving at the request of the corporation***" shall include any service as a director, officer, employee or agent of the corporation which imposes duties on, or involves services by, such director, officer, employee, or agent with respect to an employee benefit plan, its participants, or beneficiaries; and a person who acted in good faith and in a manner he reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan shall be deemed to have acted in a manner "***not opposed to the best interests of the corporation***" as referred to in this section.

ARTICLE XII

NOTICES

Section 45. Notices.

(a) Notice To Stockholders. Written notice to stockholders of stockholder meetings shall be given as provided in Section 7 herein. Without limiting the manner by which notice may otherwise be given effectively to stockholders under any agreement or contract with such stockholder, and except as otherwise required by law, written notice to stockholders for purposes other than stockholder meetings may be sent by US mail or nationally recognized overnight courier, or by facsimile, telegraph or telex or by electronic mail or other electronic means.

(b) Notice To Directors. Any notice required to be given to any director may be given by the method stated in subsection (a), as otherwise provided in these Bylaws with notice other than one which is delivered personally to be sent to such address as such director shall have filed in writing with the Secretary, or, in the absence of such filing, to the last known address of such director.

(c) Affidavit Of Mailing. An affidavit of mailing, executed by a duly authorized and competent employee of the corporation or its transfer agent appointed with respect to the class of stock affected, or other agent, specifying the name and address or the names and addresses of the stockholder or stockholders, or director or directors, to whom any such notice or notices was or were given, and the time and method of giving the same, shall in the absence of fraud, be prima facie evidence of the facts therein contained.

(d) Methods of Notice. It shall not be necessary that the same method of giving notice be employed in respect of all recipients of notice, but one permissible method may be employed in respect of any one or more, and any other permissible method or methods may be employed in respect of any other or others.

(e) Notice To Person With Whom Communication Is Unlawful. Whenever notice is required to be given, under any provision of law or of the Certificate of Incorporation or Bylaws of the corporation, to any person with whom communication is unlawful, the giving of such notice to such person shall not be required and there shall be no duty to apply to any governmental authority or agency for a license or permit to give such notice to such person. Any action or meeting which shall be taken or held without notice to any such person with whom communication is unlawful shall have the same force and effect as if such notice had been duly given. In the event that the action taken by the corporation is such as to require the filing of a certificate under any provision of the DGCL, the certificate shall state, if such is the fact and if notice is required, that notice was given to all persons entitled to receive notice except such persons with whom communication is unlawful.

(f) Notice to Stockholders Sharing an Address. Except as otherwise prohibited under DGCL, any notice given under the provisions of DGCL, the Certificate of Incorporation or the Bylaws shall be effective if given by a single written notice to stockholders who share an address if consented to by the stockholders at that address to whom such notice is given. Such consent shall have been deemed to have been given if such stockholder fails to object in writing to the corporation within sixty (60) days of having been given notice by the corporation of its intention to send the single notice. Any consent shall be revocable by the stockholder by written notice to the corporation.

ARTICLE XIII

AMENDMENTS

Section 46. Subject to the limitations set forth in Section 45(h) of these Bylaws or the provisions of the Certificate of Incorporation, the Board of Directors is expressly empowered to adopt, amend or repeal the Bylaws of the corporation. Any adoption, amendment or repeal of the Bylaws of the corporation by the Board of Directors shall require the approval of a majority of the authorized number of directors. The stockholders also shall have power to adopt, amend or repeal the Bylaws of the corporation; *provided*, *however*, that, in addition to any vote of the holders of any class or series of stock of the corporation required by law or by the Certificate of Incorporation, such action by stockholders shall require the affirmative vote of the holders of at least sixty-six and two-thirds percent (66-2/3%) of the voting power of all of the then-outstanding shares of the capital stock of the corporation entitled to vote generally in the election of directors, voting together as a single class.

ARTICLE XIV

LOANS TO OFFICERS

Section 47. Loans To Officers. Except as otherwise prohibited by applicable law, the corporation may lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the corporation or of its subsidiaries, including any officer or employee who is

a director of the corporation or its subsidiaries, whenever, in the judgment of the Board of Directors, such loan, guarantee or assistance may reasonably be expected to benefit the corporation. The loan, guarantee or other assistance may be with or without interest and may be unsecured, or secured in such manner as the Board of Directors shall approve, including, without limitation, a pledge of shares of stock of the corporation. Nothing in these Bylaws shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the corporation at common law or under any statute.

ARTICLE XV

FORUM FOR ADJUDICATION OF DISPUTES

Section 48. Forum for Adjudication of Disputes. Unless the corporation consents in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for (a) any derivative action or proceeding brought on behalf of the corporation, (b) any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the corporation to the corporation or the corporation's stockholders, (c) any action asserting a claim arising pursuant to any provision of the DGCL, or (d) any action asserting a claim governed by the internal affairs doctrine. Any person or entity purchasing or otherwise acquiring any interest in shares of capital stock of the corporation shall be deemed to have notice of and consented to the provisions of this Section 48.

ZQ|CERT#|COY|CLS|RGSTRY|ACCT#|TRANSTYPE|RUN#|TRANS#

ADURO BIOTECH

PO BOX 43004, Providence, RI 02940-3004

MR A SAMPLE
DESIGNATION (IF ANY)
ADD 1
ADD 2
ADD 3
ADD 4

CUSIP
Holder ID
Insurance Value
Number of Shares
DTC

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Certificate Numbers	Num/No.	Denom.	Total
1234567890123456890	1	1	1
1234567890123456890	2	2	2
1234567890123456890	3	3	3
1234567890123456890	4	4	4
1234567890123456890	5	5	5
1234567890123456890	6	6	6

Total Transaction 7

COMMON STOCK

PAR VALUE $0.0001

ADURO BIOTECH™

COMMON STOCK

THIS CERTIFICATE IS TRANSFERABLE IN CANTON, MA; JERSEY CITY, NJ AND COLLEGE STATION, TX

Certificate Number
ZQ00000000

Shares
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ADURO BIOTECH, INC.

INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE

THIS CERTIFIES THAT

MR. SAMPLE & MRS. SAMPLE &
MR. SAMPLE & MRS. SAMPLE

CUSIP 00739L 10 1

SEE REVERSE FOR CERTAIN DEFINITIONS

is the owner of

***ZERO HUNDRED THOUSAND
ZERO HUNDRED AND ZERO***

FULLY-PAID AND NON-ASSESSABLE SHARES OF COMMON STOCK OF

Aduro Biotech, Inc. (hereinafter called the "Company"), transferable on the books of the Company in person or by duly authorized attorney, upon surrender of this Certificate properly endorsed. This Certificate and the shares represented hereby, are issued and shall be held subject to all of the provisions of the Certificate of Incorporation, as amended, and the By-Laws, as amended, of the Company (copies of which are on file with the Company and with the Transfer Agent), to all of which each holder, by acceptance hereof, assents. This Certificate is not valid unless countersigned and registered by the Transfer Agent and Registrar.

Witness the facsimile seal of the Company and the facsimile signatures of its duly authorized officers.

DATED DD-MMM-YYYY

FACSIMILE SIGNATURE TO COME

President

ADURO BIOTECH, INC. SEAL 2011 DELAWARE

COUNTERSIGNED AND REGISTERED:
COMPUTERSHARE TRUST COMPANY, N.A.
TRANSFER AGENT AND REGISTRAR,

FACSIMILE SIGNATURE TO COME

Secretary

By _____
AUTHORIZED SIGNATURE

SECURITY INSTRUCTIONS ON REVERSE

1234567

ADURO BIOTECH, INC.

THE COMPANY WILL FURNISH WITHOUT CHARGE TO EACH SHAREHOLDER WHO SO REQUESTS, A SUMMARY OF THE POWERS, DESIGNATIONS, PREFERENCES AND RELATIVE, PARTICIPATING, OPTIONAL OR OTHER SPECIAL RIGHTS OF EACH CLASS OF STOCK OF THE COMPANY AND THE QUALIFICATIONS, LIMITATIONS OR RESTRICTIONS OF SUCH PREFERENCES AND RIGHTS, AND THE VARIATIONS IN RIGHTS, PREFERENCES AND LIMITATIONS DETERMINED FOR EACH SERIES, WHICH ARE FIXED BY THE CERTIFICATE OF INCORPORATION OF THE COMPANY, AS AMENDED, AND THE RESOLUTIONS OF THE BOARD OF DIRECTORS OF THE COMPANY, AND THE AUTHORITY OF THE BOARD OF DIRECTORS TO DETERMINE VARIATIONS FOR FUTURE SERIES. SUCH REQUEST MAY BE MADE TO THE OFFICE OF THE SECRETARY OF THE COMPANY OR TO THE TRANSFER AGENT. THE BOARD OF DIRECTORS MAY REQUIRE THE OWNER OF A LOST OR DESTROYED STOCK CERTIFICATE, OR HIS LEGAL REPRESENTATIVES, TO GIVE THE COMPANY A BOND TO INDEMNIFY IT AND ITS TRANSFER AGENTS AND REGISTRARS AGAINST ANY CLAIM THAT MAY BE MADE AGAINST THEM ON ACCOUNT OF THE ALLEGED LOSS OR DESTRUCTION OF ANY SUCH CERTIFICATE.

The following abbreviations, when used in the inscription on the face of this certificate, shall be construed as though they were written out in full according to applicable laws or regulations:

TEN COM - as tenants in common	UNIF GIFT MIN ACT -	..... (Cust) Custodian ..... (Minor)
TEN ENT - as tenants by the entireties		under Uniform Gifts to Minors Act..... (State)
JT TEN - as joint tenants with right of survivorship and not as tenants in common	UNIF TRF MIN ACT -	..... (Cust) Custodian (until age .....)
		..... (Minor) under Uniform Transfers to Minors Act ..... (State)

Additional abbreviations may also be used though not in the above list.

PLEASE INSERT SOCIAL SECURITY OR OTHER IDENTIFYING NUMBER OF ASSIGNEE

For value received, _____ hereby sell, assign and transfer unto

_____

(PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS, INCLUDING POSTAL ZIP CODE, OF ASSIGNEE)

_____

_____

_____ Shares

of the Common Stock represented by the within Certificate, and do hereby irrevocably constitute and appoint

_____ Attorney

to transfer the said stock on the books of the within named Company with full power of substitution in the premises.

Dated: _____ 20 _____

Signature: _____

Signature: _____

Notice: The signature to this assignment must correspond with the name as written upon the face of the certificate, in every particular, without alteration or enlargement, or any change whatever.

Signature(s) Guaranteed: Medallion Guarantee Stamp

THE SIGNATURE(S) SHOULD BE GUARANTEED BY AN ELIGIBLE GUARANTOR INSTITUTION (Banks, Stockbrokers, Savings and Loan Associations and Credit Unions) WITH MEMBERSHIP IN AN APPROVED SIGNATURE GUARANTEE MEDALLION PROGRAM, PURSUANT TO S.E.C. RULE 17Ad-15.

SECURITY INSTRUCTIONS

THIS IS WATERMARKED PAPER. DO NOT ACCEPT WITHOUT NOTING WATERMARK. HOLD TO LIGHT TO VERIFY WATERMARK.

The IRS requires that we report the cost basis of certain shares acquired after January 1, 2011. If your shares were covered by the legislation and you have sold or transferred the shares and requested a specific cost basis calculation method, we have processed as requested. If you did not specify a cost basis calculation method, we have defaulted to the first in, first out (FIFO) method. Please visit our website or consult your tax advisor if you need additional information about cost basis.

If you do not keep in contact with us or do not have any activity in your account for the time periods specified by state law, your property could become subject to state unclaimed property laws and transferred to the appropriate state.

153257

Cooley LLP

Michael E. Tenta
T: +1 650 843 5636
mtenta@cooley.com

EXHIBIT 5.1

April 6, 2015

Aduro Biotech, Inc.
626 Bancroft Way, 3C
Berkeley, California 94710

Ladies and Gentlemen:

You have requested our opinion, as counsel to Aduro Biotech, Inc., a Delaware corporation (the "***Company***"), in connection with the filing by the Company of a Registration Statement (No. 333-202667) on Form S-1 (the "***Registration Statement***") with the Securities and Exchange Commission, including a related prospectus filed with the Registration Statement (the "***Prospectus***"), covering an underwritten public offering of up to 5,750,000 shares (the "***Shares***") of the Company's common stock, par value $0.0001, including up to 750,000 Shares that may be sold pursuant to the exercise of an option to purchase additional shares. All of the Shares are to be sold by the Company as described in the Registration Statement and the Prospectus.

In connection with this opinion, we have (i) examined and relied upon (a) the Registration Statement and the Prospectus, (b) the Company's Restated Certificate of Incorporation, as amended, and Bylaws, as currently in effect, (c) the Company's Restated Certificate of Incorporation, filed as Exhibit 3.3 to the Registration Statement, and the Company's Amended and Restated Bylaws, filed as Exhibit 3.5 to the Registration Statement, each of which is to be in effect upon the closing of the offering contemplated by the Registration Statement, and (d) the originals or copies certified to our satisfaction of such records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below, and (ii) assumed that the Shares to be sold to the underwriters by the Company will be sold at a price established by the Board of Directors of the Company or the Pricing Committee thereof in accordance with Section 153 of the Delaware General Corporation Law. We have undertaken no independent verification with respect to such matters. We have assumed the genuineness and authenticity of all documents submitted to us as originals, and the conformity to originals of all documents submitted to us as copies and the due execution and delivery of all documents where due execution and delivery are a prerequisite to the effectiveness thereof. As to certain factual matters, we have relied upon a certificate of an officer of the Company and have not sought independently to verify such matters. Our opinion is expressed only with respect to the General Corporation Law of the State of Delaware. We express no opinion as to whether the laws of any particular jurisdiction are applicable to the subject matter hereof. We are not rendering any opinion as to compliance with any federal or state antifraud law, rule or regulation relating to securities, or to the sale or issuance thereof.

On the basis of the foregoing, and in reliance thereon, we are of the opinion that the Shares, when sold and issued against payment therefor as described in the Registration Statement and the Prospectus, will be validly issued, fully paid and non-assessable.

We consent to the reference to our firm under the caption "Legal Matters" in the Prospectus included in the Registration Statement and to the filing of this opinion as an exhibit to the Registration Statement.

Sincerely,

By: /s/ Michael E. Tenta
Michael E. Tenta, Partner

ADURO BIOTECH, INC.

2015 EQUITY INCENTIVE PLAN

ADOPTED BY THE BOARD OF DIRECTORS: MARCH 30, 2015
APPROVED BY THE STOCKHOLDERS: APRIL 1, 2015
IPO DATE/EFFECTIVE DATE: [ ], 2015

1. GENERAL.

(a) Successor to and Continuation of Prior Plan.

(i) The Plan is the successor to and continuation of the Aduro Biotech 2009 Stock Incentive Plan, as amended (the "***Prior Plan***"). From and after 12:01 a.m. Pacific time on the Effective Date, no additional stock awards will be granted under the Prior Plan. All stock awards granted under the Prior Plan remain subject to the terms of the Prior Plan. All Awards granted on or after 12:01 a.m. Pacific Time on the Effective Date will be granted under the Plan.

(ii) Any shares that would otherwise remain available for future grants under the Prior Plan as of 12:01 a.m. Pacific Time on the Effective Date ceased to be available under the Prior Plan at such time. Instead, that number of shares of Common Stock equal to the number of shares of Common Stock of the Company then available for future grants under the Prior Plan (the "***Prior Plan's Available Reserve***") was added to the Share Reserve (as further described in Section 3(a) below) and became immediately available for grants and issuance pursuant to Stock Awards under the Plan, up to the maximum number set forth in Section 3(a) below.

(iii) From and after 12:01 a.m. Pacific time on the Effective Date, a number of shares of Common Stock equal to the total number of shares of Common Stock subject, at such time, to outstanding stock options granted under the Prior Plan that: (A) expire or terminate for any reason prior to exercise or settlement; (B) are forfeited or reacquired because of the failure to meet a contingency or condition required to vest such shares or are repurchased at the original issuance price; or (C) are otherwise reacquired or withheld (or not issued) to satisfy a tax withholding obligation in connection with an award (the "***Returning Shares***") will immediately be added to the Share Reserve (as further described in Section 3(a) below) as and when such shares become Returning Shares (up to the maximum number set forth in Section 3(a)), and become available for issuance pursuant to Stock Awards granted hereunder.

(b) Eligible Award Recipients. Employees, Directors and Consultants are eligible to receive Awards.

(c) Available Awards. The Plan provides for the grant of the following Awards: (i) Incentive Stock Options, (ii) Nonstatutory Stock Options, (iii) Stock Appreciation Rights (iv) Restricted Stock Awards, (v) Restricted Stock Unit Awards, (vi) Performance Stock Awards, (vii) Performance Cash Awards, and (viii) Other Stock Awards.

(d) Purpose. The Plan, through the granting of Awards, is intended to help the Company secure and retain the services of eligible award recipients, provide incentives for such persons to exert maximum efforts for the success of the Company and any Affiliate, and provide a means by which the eligible recipients may benefit from increases in value of the Common Stock.

2. ADMINISTRATION.

(a) Administration by Board. The Board will administer the Plan. The Board may delegate administration of the Plan to a Committee or Committees, as provided in Section 2(c).

(b) Powers of Board. The Board will have the power, subject to, and within the limitations of, the express provisions of the Plan:

(i) To determine: (A) who will be granted Awards; (B) when and how each Award will be granted; (C) what type of Award will be granted; (D) the provisions of each Award (which need not be identical), including when a person will be permitted to exercise or otherwise receive cash or Common Stock under the Award; (E) the number of shares of Common Stock subject to, or the cash value of, an Award; and (F) the Fair Market Value applicable to a Stock Award.

(ii) To construe and interpret the Plan and Awards granted under it, and to establish, amend and revoke rules and regulations for administration of the Plan and Awards. The Board, in the exercise of these powers, may correct any defect, omission or inconsistency in the Plan or in any Award Agreement or in the written terms of a Performance Cash Award, in a manner and to the extent it will deem necessary or expedient to make the Plan or Award fully effective.

(iii) To settle all controversies regarding the Plan and Awards granted under it.

(iv) To accelerate, in whole or in part, the time at which an Award may be exercised or vest (or at which cash or shares of Common Stock may be issued).

(v) To suspend or terminate the Plan at any time. Except as otherwise provided in the Plan or an Award Agreement, suspension or termination of the Plan will not materially impair a Participant's rights under his or her then-outstanding Award without his or her written consent, except as provided in subsection (viii) below.

(vi) To amend the Plan in any respect the Board deems necessary or advisable, including, without limitation, by adopting amendments relating to Incentive Stock Options and certain nonqualified deferred compensation under Section 409A of the Code and/or to bring the Plan or Awards granted under the Plan into compliance therewith, subject to the limitations, if any, of applicable law. If required by applicable law or listing requirements, and except as provided in Section 9(a) relating to Capitalization Adjustments, the Company will seek stockholder approval of any amendment of the Plan that (A) materially increases the number of shares of Common Stock available for issuance under the Plan, (B) materially expands the class of individuals eligible to receive Awards under the Plan, (C) materially increases the benefits accruing to Participants under the Plan, (D) materially extends the term of the Plan, or (E)

materially expands the types of Awards available for issuance under the Plan. Except as otherwise provided in the Plan or an Award Agreement, no amendment of the Plan will materially impair that Participant's rights under an outstanding Award without his or her written consent.

(vii) To submit any amendment to the Plan for stockholder approval, including, but not limited to, amendments to the Plan intended to satisfy the requirements of (A) Section 162(m) of the Code regarding the exclusion of performance-based compensation from the limit on corporate deductibility of compensation paid to Covered Employees, (B) Section 422 of the Code regarding "incentive stock options" or (C) Rule 16b-3.

(viii) To approve forms of Award Agreements for use under the Plan and to amend the terms of any one or more outstanding Awards. Except with respect to amendments that disqualify or impair the status of an Incentive Stock Option or as otherwise provided in the Plan or an Award Agreement, no amendment of an outstanding Award will materially impair that Participant's rights under his or her outstanding Award without his or her written consent. To be clear, unless prohibited by applicable law, the Board may amend the terms of an Award without the affected Participant's consent if necessary (A) to maintain the qualified status of the Award as an Incentive Stock Option, (B) to clarify the manner of exemption from, or to bring the Award into compliance with, Section 409A of the Code, or (C) to comply with other applicable laws or listing requirements.

(ix) Generally, to exercise such powers and to perform such acts as the Board deems necessary or expedient to promote the best interests of the Company and that are not in conflict with the provisions of the Plan or Awards.

(x) To adopt such procedures and sub-plans as are necessary or appropriate to permit or facilitate participation in the Plan by Employees, Directors or Consultants who are foreign nationals or employed outside the United States or allow Awards to qualify for special tax treatment in a foreign jurisdiction; *provided*, that Board approval will not be necessary for immaterial modifications to the Plan or any Award Agreement that are required for compliance with the laws of the relevant foreign jurisdiction.

(c) Delegation to Committee.

(i) General. The Board may delegate some or all of the administration of the Plan to a Committee or Committees. If administration of the Plan is delegated to a Committee, the Committee will have, in connection with the administration of the Plan, the powers theretofore possessed by the Board that have been delegated to the Committee, including the power to delegate to a subcommittee of the Committee any of the administrative powers the Committee is authorized to exercise (and references in this Plan to the Board will thereafter be to the Committee or subcommittee, as applicable). Any delegation of administrative powers will be reflected in resolutions, not inconsistent with the provisions of the Plan, adopted from time to time by the Board or Committee (as applicable). The Committee may, at any time, abolish the subcommittee and/or revest in the Committee any powers delegated to the subcommittee. The Board may retain the authority to concurrently administer the Plan with the Committee and may, at any time, revest in the Board some or all of the powers previously delegated.

(ii) Section 162(m) and Rule 16b-3 Compliance. The Committee may consist solely of two or more Outside Directors, in accordance with Section 162(m) of the Code, or solely of two or more Non-Employee Directors, in accordance with Rule 16b-3.

(d) Delegation to an Officer. The Board may delegate to one or more Officers the authority to do one or both of the following (i) designate Employees who are not Officers to be recipients of Options and SARs (and, to the extent permitted by applicable law, other Stock Awards) and, to the extent permitted by applicable law, the terms of such rights and options, and (ii) determine the number of shares of Common Stock to be subject to such Stock Awards granted to such Employees; *provided*, *however*, that the Board resolutions regarding such delegation will specify the total number of shares of Common Stock that may be subject to the Stock Awards granted by such Officer and that such Officer may not grant a Stock Award to himself or herself. Any such Stock Awards will be granted on the form of Stock Award Agreement most recently approved for use by the Committee or the Board, unless otherwise provided in the resolutions approving the delegation authority. The Board may not delegate authority to an Officer who is acting solely in the capacity of an Officer (and not also as a Director) to determine the Fair Market Value (as defined below).

(e) Effect of Board's Decision. All determinations, interpretations and constructions made by the Board in good faith will not be subject to review by any person and will be final, binding and conclusive on all persons.

3. SHARES SUBJECT TO THE PLAN.

(a) Share Reserve.

(i) Subject to Section 9(a) relating to Capitalization Adjustments and the "evergreen" provision in Section 3(a)(ii), the aggregate number of shares of Common Stock that may be issued pursuant to Stock Awards from and after the Effective Date (the "***Share Reserve***") will not exceed 6,134,292 shares (the "***Share Reserve***"), which number will be increased by the number of shares that are Returning Shares, as such shares become available from time to time, in an amount not to exceed 8,995,064 shares.

(ii) In addition, the Share Reserve will automatically increase on January 1st of each year, for the period commencing on (and including) January 1, 2016 and ending on (and including) January 1, 2025, in an amount equal to 4% of the total number of shares of Capital Stock outstanding on December 31st of the preceding calendar year. Notwithstanding the foregoing, the Board may act prior to January 1st of a given year to provide that there will be no January 1st increase in the Share Reserve for such year or that the increase in the Share Reserve for such year will be a lesser number of shares of Common Stock than would otherwise occur pursuant to the preceding sentence.

(iii) For clarity, the Share Reserve is a limitation on the number of shares of Common Stock that may be issued under the Plan. As a single share may be subject to grant more than once (e.g., if a share subject to a Stock Award is forfeited, it may be made subject to grant again as provided in Section 3(b) below), the Share Reserve is not a limit on the number of Stock Awards that can be granted.

(iv) Shares may be issued in connection with a merger or acquisition as permitted by NASDAQ Listing Rule 5635(c) or, if applicable, NYSE Listed Company Manual Section 303A.08, AMEX Company Guide Section 711 or other applicable rule, and such issuance will not reduce the number of shares available for issuance under the Plan.

(b) Reversion of Shares to the Share Reserve. If a Stock Award or any portion of a Stock Award (i) expires or otherwise terminates without all of the shares covered by such Stock Award having been issued or (ii) is settled in cash (*i.e.*, the Participant receives cash rather than stock), such expiration, termination or settlement will not reduce (or otherwise offset) the number of shares of Common Stock that may be available for issuance under the Plan. If any shares of Common Stock issued pursuant to a Stock Award are forfeited back to or repurchased by the Company because of the failure to meet a contingency or condition required to vest such shares in the Participant, then the shares that are forfeited or repurchased will revert to and again become available for issuance under the Plan. Any shares reacquired by the Company in satisfaction of tax withholding obligations on a Stock Award or as consideration for the exercise or purchase price of a Stock Award will again become available for issuance under the Plan.

(c) Incentive Stock Option Limit. Subject to the provisions of Section 9(a) relating to Capitalization Adjustments, the aggregate maximum number of shares of Common Stock that may be issued pursuant to the exercise of Incentive Stock Options will be 30,671,460 shares of Common Stock.

(d) Section 162(m) Limitations. Subject to the provisions of Section 9(a) relating to Capitalization Adjustments, at such time as the Company may be subject to the applicable provisions of Section 162(m) of the Code: (i) a maximum of 2,000,000 shares of Common Stock subject to Options, SARs and Other Stock Awards whose value is determined by reference to an increase over an exercise or strike price of at least 100% of the Fair Market Value on the date the Stock Award is granted may be granted to any one Participant during any one calendar year, (ii) a maximum of 2,00,000 shares of Common Stock subject to Performance Stock Awards may be granted to any one Participant during any one calendar year (whether the grant, vesting or exercise is contingent upon the attainment during the Performance Period of the Performance Goals) and (iii) a maximum of $5,000,000 may be granted as a Performance Cash Award to any one Participant during any one calendar year. If a Performance Stock Award is in the form of an Option, it will count only against the Performance Stock Award limit. If a Performance Stock Award could (but is not required to) be paid out in cash, it will count only against the Performance Stock Award limit.

(e) Source of Shares. The stock issuable under the Plan will be shares of authorized but unissued or reacquired Common Stock, including shares repurchased by the Company on the open market or otherwise.

4. ELIGIBILITY.

(a) Eligibility for Specific Stock Awards. Incentive Stock Options may be granted only to employees of the Company or a "parent corporation" or "subsidiary corporation" thereof (as such terms are defined in Sections 424(e) and 424(f) of the Code). Stock Awards other than Incentive Stock Options may be granted to Employees, Directors and Consultants; *provided*,

however, that Stock Awards may not be granted to Employees, Directors and Consultants who are providing Continuous Service only to any "parent" of the Company, as such term is defined in Rule 405 of the Securities Act, unless (i) the stock underlying such Stock Awards is treated as "service recipient stock" under Section 409A of the Code (for example, because the Stock Awards are granted pursuant to a corporate transaction such as a spin off transaction), (ii) the Company, in consultation with its legal counsel, has determined that such Stock Awards are otherwise exempt from Section 409A of the Code, or (iii) the Company, in consultation with its legal counsel, has determined that such Stock Awards comply with the distribution requirements of Section 409A of the Code.

(b) Ten Percent Stockholders. A Ten Percent Stockholder will not be granted an Incentive Stock Option unless the exercise price of such Option is at least 110% of the Fair Market Value on the date of grant and the Option is not exercisable after the expiration of five years from the date of grant.

5. PROVISIONS RELATING TO OPTIONS AND STOCK APPRECIATION RIGHTS.

Each Option or SAR will be in such form and will contain such terms and conditions as the Board deems appropriate. All Options will be separately designated Incentive Stock Options or Nonstatutory Stock Options at the time of grant, and, if certificates are issued, a separate certificate or certificates will be issued for shares of Common Stock purchased on exercise of each type of Option. If an Option is not specifically designated as an Incentive Stock Option, or if an Option is designated as an Incentive Stock Option but some portion or all of the Option fails to qualify as an Incentive Stock Option under the applicable rules, then the Option (or portion thereof) will be a Nonstatutory Stock Option. The provisions of separate Options or SARs need not be identical; *provided*, *however*, that each Award Agreement will conform to (through incorporation of provisions hereof by reference in the applicable Award Agreement or otherwise) the substance of each of the following provisions:

(a) Term. Subject to the provisions of Section 4(b) regarding Ten Percent Stockholders, no Option or SAR will be exercisable after the expiration of ten years from the date of its grant or such shorter period specified in the Award Agreement.

(b) Exercise Price. Subject to the provisions of Section 4(b) regarding Ten Percent Stockholders, the exercise or strike price of each Option or SAR will be not less than 100% of the Fair Market Value of the Common Stock subject to the Option or SAR on the date the Award is granted. Notwithstanding the foregoing, an Option or SAR may be granted with an exercise or strike price lower than 100% of the Fair Market Value of the Common Stock subject to the Award if such Award is granted pursuant to an assumption of or substitution for another option or stock appreciation right pursuant to a Corporate Transaction and in a manner consistent with the provisions of Section 409A of the Code and, if applicable, Section 424(a) of the Code. Each SAR will be denominated in shares of Common Stock equivalents.

(c) Purchase Price for Options. The purchase price of Common Stock acquired pursuant to the exercise of an Option may be paid, to the extent permitted by applicable law and as determined by the Board in its sole discretion, by any combination of the methods of payment set forth below. The Board will have the authority to grant Options that do not permit all of the

following methods of payment (or otherwise restrict the ability to use certain methods) and to grant Options that require the consent of the Company to use a particular method of payment. The permitted methods of payment are as follows:

(i) by cash, check, bank draft or money order payable to the Company;

(ii) pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board that, prior to the issuance of the stock subject to the Option, results in either the receipt of cash (or check) by the Company or the receipt of irrevocable instructions to pay the aggregate exercise price to the Company from the sales proceeds;

(iii) by delivery to the Company (either by actual delivery or attestation) of shares of Common Stock;

(iv) if an Option is a Nonstatutory Stock Option, by a "net exercise" arrangement pursuant to which the Company will reduce the number of shares of Common Stock issuable upon exercise by the largest whole number of shares with a Fair Market Value that does not exceed the aggregate exercise price; *provided*, *however*, that the Company will accept a cash or other payment from the Participant to the extent of any remaining balance of the aggregate exercise price not satisfied by such reduction in the number of whole shares to be issued. Shares of Common Stock will no longer be subject to an Option and will not be exercisable thereafter to the extent that (A) shares issuable upon exercise are reduced to pay the exercise price pursuant to the "net exercise," (B) shares are delivered to the Participant as a result of such exercise, and (C) shares are withheld to satisfy tax withholding obligations; or

(v) in any other form of legal consideration that may be acceptable to the Board and specified in the applicable Award Agreement.

(d) Exercise and Payment of a SAR. To exercise any outstanding SAR, the Participant must provide written notice of exercise to the Company in compliance with the provisions of the Stock Appreciation Right Agreement evidencing such SAR. The appreciation distribution payable on the exercise of a SAR will be not greater than an amount equal to the excess of (A) the aggregate Fair Market Value (on the date of the exercise of the SAR) of a number of shares of Common Stock equal to the number of Common Stock equivalents in which the Participant is vested under such SAR, and with respect to which the Participant is exercising the SAR on such date, over (B) the aggregate strike price of the number of Common Stock equivalents with respect to which the Participant is exercising the SAR on such date. The appreciation distribution may be paid in Common Stock, in cash, in any combination of the two or in any other form of consideration, as determined by the Board and contained in the Award Agreement evidencing such SAR.

(e) Transferability of Options and SARs. The Board may, in its sole discretion, impose such limitations on the transferability of Options and SARs as the Board will determine. In the absence of such a determination by the Board to the contrary, the following restrictions on the transferability of Options and SARs will apply:

(i) Restrictions on Transfer. An Option or SAR will not be transferable except by will or by the laws of descent and distribution (or pursuant to subsections (ii) and (iii)

below), and will be exercisable during the lifetime of the Participant only by the Participant. The Board may permit transfer of the Option or SAR in a manner that is not prohibited by applicable tax and securities laws. Except as explicitly provided in the Plan, neither an Option nor a SAR may be transferred for consideration.

(ii) Domestic Relations Orders. Subject to the approval of the Board or a duly authorized Officer, an Option or SAR may be transferred pursuant to the terms of a domestic relations order or official marital settlement agreement or other divorce or separation instrument as permitted by Treasury Regulations Section 1.421-1(b)(2). If an Option is an Incentive Stock Option, such Option may be deemed to be a Nonstatutory Stock Option as a result of such transfer.

(iii) Beneficiary Designation. Subject to the approval of the Board or a duly authorized Officer, a Participant may, by delivering written notice to the Company, in a form approved by the Company (or the designated broker), designate a third party who, on the death of the Participant, will thereafter be entitled to exercise the Option or SAR and receive the Common Stock or other consideration resulting from such exercise. In the absence of such a designation, the executor or administrator of the Participant's estate will be entitled to exercise the Option or SAR and receive the Common Stock or other consideration resulting from such exercise. However, the Company may prohibit designation of a beneficiary at any time, including due to any conclusion by the Company that such designation would be inconsistent with the provisions of applicable laws.

(f) Vesting Generally. The total number of shares of Common Stock subject to an Option or SAR may vest and therefore become exercisable in periodic installments that may or may not be equal. The Option or SAR may be subject to such other terms and conditions on the time or times when it may or may not be exercised (which may be based on the satisfaction of Performance Goals or other criteria) as the Board may deem appropriate. The vesting provisions of individual Options or SARs may vary. The provisions of this Section 5(f) are subject to any Option or SAR provisions governing the minimum number of shares of Common Stock as to which an Option or SAR may be exercised.

(g) Termination of Continuous Service. Except as otherwise provided in the applicable Award Agreement or other agreement between the Participant and the Company, if a Participant's Continuous Service terminates (other than for Cause and other than upon the Participant's death or Disability), the Participant may exercise his or her Option or SAR (to the extent that the Participant was entitled to exercise such Award as of the date of termination of Continuous Service) within the period of time ending on the earlier of (i) the date which occurs three months following the termination of the Participant's Continuous Service (or such longer or shorter period specified in the applicable Award Agreement) and (ii) the expiration of the term of the Option or SAR as set forth in the Award Agreement. If, after termination of Continuous Service, the Participant does not exercise his or her Option or SAR within the applicable time frame, the Option or SAR will terminate.

(h) Extension of Termination Date. Except as otherwise provided in the applicable Award Agreement, if the exercise of an Option or SAR following the termination of the Participant's Continuous Service (other than for Cause and other than upon the Participant's

death or Disability) would be prohibited at any time solely because the issuance of shares of Common Stock would violate the registration requirements under the Securities Act, then the Option or SAR will terminate on the earlier of (i) the expiration of a total period of three months (that need not be consecutive) equal to the applicable post-termination exercise period after the termination of the Participant's Continuous Service during which the exercise of the Option or SAR would not be in violation of such registration requirements, and (ii) the expiration of the term of the Option or SAR as set forth in the applicable Award Agreement. In addition, unless otherwise provided in a Participant's Award Agreement, if the sale of any Common Stock received upon exercise of an Option or SAR following the termination of the Participant's Continuous Service (other than for Cause) would violate the Company's insider trading policy, then the Option or SAR will terminate on the earlier of (i) the expiration of a period of days or months (that need not be consecutive) equal to the applicable post-termination exercise period after the termination of the Participant's Continuous Service during which the sale of the Common Stock received upon exercise of the Option or SAR would not be in violation of the Company's insider trading policy, or (ii) the expiration of the term of the Option or SAR as set forth in the applicable Award Agreement.

(i) Disability of Participant. Except as otherwise provided in the applicable Award Agreement or other agreement between the Participant and the Company, if a Participant's Continuous Service terminates as a result of the Participant's Disability, the Participant may exercise his or her Option or SAR (to the extent that the Participant was entitled to exercise such Option or SAR as of the date of termination of Continuous Service), but only within such period of time ending on the earlier of (i) the date which occurs 12 months following such termination of Continuous Service (or such longer or shorter period specified in the Award Agreement), and (ii) the expiration of the term of the Option or SAR as set forth in the Award Agreement. If, after termination of Continuous Service, the Participant does not exercise his or her Option or SAR within the applicable time frame, the Option or SAR (as applicable) will terminate.

(j) Death of Participant. Except as otherwise provided in the applicable Award Agreement or other agreement between the Participant and the Company, if (i) a Participant's Continuous Service terminates as a result of the Participant's death, or (ii) the Participant dies within the period (if any) specified in the Award Agreement for exercisability after the termination of the Participant's Continuous Service for a reason other than death, then the Option or SAR may be exercised (to the extent the Participant was entitled to exercise such Option or SAR as of the date of death) by the Participant's estate, by a person who acquired the right to exercise the Option or SAR by bequest or inheritance or by a person designated to exercise the Option or SAR upon the Participant's death, but only within the period ending on the earlier of (i) the date which occurs 18 months following the date of death (or such longer or shorter period specified in the Award Agreement), and (ii) the expiration of the term of such Option or SAR as set forth in the Award Agreement. If, after the Participant's death, the Option or SAR is not exercised within the applicable time frame, the Option or SAR will terminate.

(k) Termination for Cause. Except as explicitly provided otherwise in a Participant's Award Agreement or other individual written agreement between the Company or any Affiliate and the Participant, if a Participant's Continuous Service is terminated for Cause, the Option or SAR will terminate immediately upon the date on which the event giving rise to the termination for Cause first occurred, and the Participant will be prohibited from exercising

his or her Option or SAR from and after the date on which the event giving rise to the termination for Cause first occurred (or, if required by law, the date of termination of Continuous Service). If a Participant's Continuous Service is suspended pending an investigation of the existence of Cause, all of the Participant's rights under the Option or SAR will also be suspended during the investigation period.

(l) Non-Exempt Employees. If an Option or SAR is granted to an Employee who is a non-exempt employee for purposes of the Fair Labor Standards Act of 1938, as amended, the Option or SAR will not be first exercisable for any shares of Common Stock until at least six (6) months following the date of grant of the Option or SAR (although the Award may vest prior to such date). Consistent with the provisions of the Worker Economic Opportunity Act, (i) if such non-exempt Employee dies or suffers a Disability, (ii) upon a Corporate Transaction in which such Option or SAR is not assumed, continued, or substituted, (iii) upon a Change in Control, or (iv) upon the Participant's retirement (as such term may be defined in the Participant's Award Agreement in another agreement between the Participant and the Company, or, if no such definition, in accordance with the Company's then current employment policies and guidelines), the vested portion of any Options and SARs may be exercised earlier than six (6) months following the date of grant. The foregoing provision is intended to operate so that any income derived by a non-exempt employee in connection with the exercise or vesting of an Option or SAR will be exempt from his or her regular rate of pay. To the extent permitted and/or required for compliance with the Worker Economic Opportunity Act to ensure that any income derived by a non-exempt employee in connection with the exercise, vesting or issuance of any shares under any other Stock Award will be exempt from the employee's regular rate of pay, the provisions of this Section 5(l) will apply to all Stock Awards and are hereby incorporated by reference into such Stock Award Agreements.

6. PROVISIONS OF STOCK AWARDS OTHER THAN OPTIONS AND SARS.

(a) Restricted Stock Awards. Each Restricted Stock Award Agreement will be in such form and will contain such terms and conditions as the Board will deem appropriate. To the extent consistent with the Company's bylaws, at the Board's election, shares of Common Stock may be (x) held in book entry form subject to the Company's instructions until any restrictions relating to the Restricted Stock Award lapse; or (y) evidenced by a certificate, which certificate will be held in such form and manner as determined by the Board. The terms and conditions of Restricted Stock Award Agreements may change from time to time, and the terms and conditions of separate Restricted Stock Award Agreements need not be identical. Each Restricted Stock Award Agreement will conform to (through incorporation of the provisions hereof by reference in the agreement or otherwise) the substance of each of the following provisions:

(i) Consideration. A Restricted Stock Award may be awarded in consideration for (A) cash, check, bank draft or money order payable to the Company, (B) past services to the Company or an Affiliate, or (C) any other form of legal consideration (including future services) that may be acceptable to the Board, in its sole discretion, and permissible under applicable law.

(ii) Vesting. Shares of Common Stock awarded under the Restricted Stock Award Agreement may be subject to forfeiture to the Company in accordance with a vesting schedule to be determined by the Board.

(iii) Termination of Participant's Continuous Service. If a Participant's Continuous Service terminates, the Company may receive through a forfeiture condition or a repurchase right any or all of the shares of Common Stock held by the Participant that have not vested as of the date of termination of Continuous Service under the terms of the Restricted Stock Award Agreement.

(iv) Transferability. Rights to acquire shares of Common Stock under the Restricted Stock Award Agreement will be transferable by the Participant only upon such terms and conditions as are set forth in the Restricted Stock Award Agreement, as the Board will determine in its sole discretion, so long as Common Stock awarded under the Restricted Stock Award Agreement remains subject to the terms of the Restricted Stock Award Agreement.

(v) Dividends. A Restricted Stock Award Agreement may provide that any dividends paid on Restricted Stock will be subject to the same vesting and forfeiture restrictions as apply to the shares subject to the Restricted Stock Award to which they relate.

(b) Restricted Stock Unit Awards. Each Restricted Stock Unit Award Agreement will be in such form and will contain such terms and conditions as the Board will deem appropriate. The terms and conditions of Restricted Stock Unit Award Agreements may change from time to time, and the terms and conditions of separate Restricted Stock Unit Award Agreements need not be identical. Each Restricted Stock Unit Award Agreement will conform to (through incorporation of the provisions hereof by reference in the Agreement or otherwise) the substance of each of the following provisions:

(i) Consideration. At the time of grant of a Restricted Stock Unit Award, the Board will determine the consideration, if any, to be paid by the Participant upon delivery of each share of Common Stock subject to the Restricted Stock Unit Award. The consideration to be paid (if any) by the Participant for each share of Common Stock subject to a Restricted Stock Unit Award may be paid in any form of legal consideration that may be acceptable to the Board, in its sole discretion, and permissible under applicable law.

(ii) Vesting. At the time of the grant of a Restricted Stock Unit Award, the Board may impose such restrictions on or conditions to the vesting of the Restricted Stock Unit Award as it, in its sole discretion, deems appropriate.

(iii) Payment. A Restricted Stock Unit Award may be settled by the delivery of shares of Common Stock, their cash equivalent, any combination thereof or in any other form of consideration, as determined by the Board and contained in the Restricted Stock Unit Award Agreement.

(iv) Additional Restrictions. At the time of the grant of a Restricted Stock Unit Award, the Board, as it deems appropriate, may impose such restrictions or conditions that delay the delivery of the shares of Common Stock (or their cash equivalent) subject to a Restricted Stock Unit Award to a time after the vesting of such Restricted Stock Unit Award.

(v) Dividend Equivalents. Dividend equivalents may be credited in respect of shares of Common Stock covered by a Restricted Stock Unit Award, as determined by the Board and contained in the Restricted Stock Unit Award Agreement. At the sole discretion of the Board, such dividend equivalents may be converted into additional shares of Common Stock covered by the Restricted Stock Unit Award in such manner as determined by the Board. Any additional shares covered by the Restricted Stock Unit Award credited by reason of such dividend equivalents will be subject to all of the same terms and conditions of the underlying Restricted Stock Unit Award Agreement to which they relate.

(vi) Termination of Participant's Continuous Service. Except as otherwise provided in the applicable Restricted Stock Unit Award Agreement, such portion of the Restricted Stock Unit Award that has not vested will be forfeited upon the Participant's termination of Continuous Service.

(c) Performance Awards.

(i) Performance Stock Awards. A Performance Stock Award is a Stock Award (covering a number of shares not in excess of that set forth in Section 3(d) above) that is payable or that may be granted, may vest or may be exercised, contingent upon the attainment during a Performance Period of certain Performance Goals. A Performance Stock Award may, but need not, require the completion of a specified period of Continuous Service. The length of any Performance Period, the Performance Goals to be achieved during the Performance Period, and the measure of whether and to what degree such Performance Goals have been attained will be conclusively determined by the Committee (or, if not required for compliance with Section 162(m) of the Code, the Board), in its sole discretion. In addition, to the extent permitted by applicable law and the applicable Award Agreement, the Board may determine that cash may be used in payment of Performance Stock Awards.

(ii) Performance Cash Awards. A Performance Cash Award is a cash award (for a dollar value not in excess of that set forth in Section 3(d) above) that is payable contingent upon the attainment during a Performance Period of certain Performance Goals. A Performance Cash Award may also require the completion of a specified period of Continuous Service. At the time of grant of a Performance Cash Award, the length of any Performance Period, the Performance Goals to be achieved during the Performance Period, and the measure of whether and to what degree such Performance Goals have been attained will be conclusively determined by the Committee (or, if not required for compliance with Section 162(m) of the Code, the Board), in its sole discretion. The Board may specify the form of payment of Performance Cash Awards, which may be cash or other property, or may provide for a Participant to have the option for his or her Performance Cash Award, or such portion thereof as the Board may specify, to be paid in whole or in part in cash or other property.

(iii) Section 162(m) Compliance. Unless otherwise permitted in compliance with the requirements of Section 162(m) of the Code with respect to an Award intended to qualify as "performance-based compensation" thereunder, the Committee will establish the Performance Goals applicable to, and the formula for calculating the amount payable under, the Award no later than the earlier of (a) the date 90 days after the commencement of the applicable Performance Period, and (b) the date on which 25% of the Performance Period has elapsed, and

in any event at a time when the achievement of the applicable Performance Goals remains substantially uncertain. Prior to the payment of any compensation under an Award intended to qualify as "performance-based compensation" under Section 162(m) of the Code, the Committee will certify the extent to which any Performance Goals and any other material terms under such Award have been satisfied (other than in cases where such relate solely to the increase in the value of the Common Stock). Notwithstanding satisfaction of any completion of any Performance Goals, the number of shares of Common Stock, Options, cash or other benefits granted, issued, retainable and/or vested under an Award on account of satisfaction of such Performance Goals may be reduced by the Committee on the basis of such further considerations as the Committee, in its sole discretion, will determine.

(d) Other Stock Awards. Other forms of Stock Awards valued in whole or in part by reference to, or otherwise based on, Common Stock, including the appreciation in value thereof, may be granted either alone or in addition to Stock Awards provided for under Section 5 and the preceding provisions of this Section 6. Subject to the provisions of the Plan, the Board will have sole and complete authority to determine the persons to whom and the time or times at which such Other Stock Awards will be granted, the number of shares of Common Stock (or the cash equivalent thereof) to be granted pursuant to such Other Stock Awards and all other terms and conditions of such Other Stock Awards.

7. COVENANTS OF THE COMPANY.

(a) Availability of Shares. The Company will keep available at all times the number of shares of Common Stock reasonably required to satisfy then-outstanding Awards.

(b) Securities Law Compliance. The Company will seek to obtain from each regulatory commission or agency having jurisdiction over the Plan such authority as may be required to grant Stock Awards and to issue and sell shares of Common Stock upon exercise of the Stock Awards; *provided*, *however*, that this undertaking will not require the Company to register under the Securities Act the Plan, any Stock Award or any Common Stock issued or issuable pursuant to any such Stock Award. If, after reasonable efforts and at a reasonable cost, the Company is unable to obtain from any such regulatory commission or agency the authority that counsel for the Company deems necessary for the lawful issuance and sale of Common Stock under the Plan, the Company will be relieved from any liability for failure to issue and sell Common Stock upon exercise of such Stock Awards unless and until such authority is obtained. A Participant will not be eligible for the grant of an Award or the subsequent issuance of cash or Common Stock pursuant to the Award if such grant or issuance would be in violation of any applicable securities law.

(c) No Obligation to Notify or Minimize Taxes. The Company will have no duty or obligation to any Participant to advise such holder as to the time or manner of exercising such Stock Award. Furthermore, the Company will have no duty or obligation to warn or otherwise advise such holder of a pending termination or expiration of an Award or a possible period in which the Award may not be exercised. The Company has no duty or obligation to minimize the tax consequences of an Award to the holder of such Award.

8. MISCELLANEOUS.

(a) Use of Proceeds from Sales of Common Stock. Proceeds from the sale of shares of Common Stock pursuant to Awards will constitute general funds of the Company.

(b) Corporate Action Constituting Grant of Awards. Corporate action constituting a grant by the Company of an Award to any Participant will be deemed completed as of the date of such corporate action, unless otherwise determined by the Board, regardless of when the instrument, certificate, or letter evidencing the Award is communicated to, or actually received or accepted by, the Participant. In the event that the corporate records (e.g., Board consents, resolutions or minutes) documenting the corporate action constituting the grant contain terms (e.g., exercise price, vesting schedule or number of shares) that are inconsistent with those in the Award Agreement or related grant documents as a result of a clerical error in the papering of the Award Agreement or related grant documents, the corporate records will control and the Participant will have no legally binding right to the incorrect term in the Award Agreement or related grant documents.

(c) Stockholder Rights. No Participant will be deemed to be the holder of, or to have any of the rights of a holder with respect to, any shares of Common Stock subject to an Award unless and until (i) such Participant has satisfied all requirements for exercise of, or the issuance of shares of Common Stock under, the Award pursuant to its terms, and (ii) the issuance of the Common Stock subject to such Award has been entered into the books and records of the Company.

(d) No Employment or Other Service Rights. Nothing in the Plan, any Award Agreement or any other instrument executed thereunder or in connection with any Award granted pursuant thereto will confer upon any Participant any right to continue to serve the Company or an Affiliate in the capacity in effect at the time the Award was granted or will affect the right of the Company or an Affiliate to terminate (i) the employment of an Employee with or without notice and with or without Cause, (ii) the service of a Consultant pursuant to the terms of such Consultant's agreement with the Company or an Affiliate, or (iii) the service of a Director pursuant to the bylaws of the Company or an Affiliate, and any applicable provisions of the corporate law of the state in which the Company or the Affiliate is incorporated, as the case may be.

(e) Change in Time Commitment. In the event a Participant's regular level of time commitment in the performance of his or her services for the Company and any Affiliates is reduced (for example, and without limitation, if the Participant is an Employee of the Company and the Employee has a change in status from a full-time Employee to a part-time Employee or takes an extended leave of absence) after the date of grant of any Award to the Participant, the Board has the right in its sole discretion to (x) make a corresponding reduction in the number of shares or cash amount subject to any portion of such Award that is scheduled to vest or become payable after the date of such change in time commitment, and (y) in lieu of or in combination with such a reduction, extend the vesting or payment schedule applicable to such Award. In the event of any such reduction, the Participant will have no right with respect to any portion of the Award that is so reduced or extended.

(f) Incentive Stock Option Limitations. To the extent that the aggregate Fair Market Value (determined at the time of grant) of Common Stock with respect to which Incentive Stock Options are exercisable for the first time by any Optionholder during any calendar year (under all plans of the Company and any Affiliates) exceeds $100,000 (or such other limit established in the Code) or otherwise does not comply with the rules governing Incentive Stock Options, the Options or portions thereof that exceed such limit (according to the order in which they were granted) or otherwise do not comply with the rules will be treated as Nonstatutory Stock Options, notwithstanding any contrary provision of the applicable Option Agreement(s).

(g) Investment Assurances. The Company may require a Participant, as a condition of exercising or acquiring Common Stock under any Award, (i) to give written assurances satisfactory to the Company as to the Participant's knowledge and experience in financial and business matters and/or to employ a purchaser representative reasonably satisfactory to the Company who is knowledgeable and experienced in financial and business matters and that he or she is capable of evaluating, alone or together with the purchaser representative, the merits and risks of exercising the Award; and (ii) to give written assurances satisfactory to the Company stating that the Participant is acquiring Common Stock subject to the Award for the Participant's own account and not with any present intention of selling or otherwise distributing the Common Stock. The foregoing requirements, and any assurances given pursuant to such requirements, will be inoperative if (A) the issuance of the shares upon the exercise or acquisition of Common Stock under the Award has been registered under a then currently effective registration statement under the Securities Act, or (B) as to any particular requirement, a determination is made by counsel for the Company that such requirement need not be met in the circumstances under the then applicable securities laws. The Company may, upon advice of counsel to the Company, place legends on stock certificates issued under the Plan as such counsel deems necessary or appropriate in order to comply with applicable securities laws, including, but not limited to, legends restricting the transfer of the Common Stock.

(h) Withholding Obligations. Unless prohibited by the terms of an Award Agreement, the Company may, in its sole discretion, satisfy any federal, state or local tax withholding obligation relating to an Award by any of the following means or by a combination of such means: (i) causing the Participant to tender a cash payment; (ii) withholding shares of Common Stock from the shares of Common Stock issued or otherwise issuable to the Participant in connection with the Award; *provided*, *however*, that no shares of Common Stock are withheld with a value exceeding the minimum amount of tax required to be withheld by law (or such lesser amount as may be necessary to avoid classification of the Stock Award as a liability for financial accounting purposes); (iii) withholding cash from an Award settled in cash; (iv) withholding payment from any amounts otherwise payable to the Participant, including proceeds from the sale of shares of Common Stock issued pursuant to a Stock Award; or (v) by such other method as may be set forth in the Award Agreement.

(i) Electronic Delivery. Any reference herein to a "written" agreement or document will include any agreement or document delivered electronically, filed publicly at www.sec.gov (or any successor website thereto) or posted on the Company's intranet (or other shared electronic medium controlled by the Company to which the Participant has access).

(j) Deferrals. To the extent permitted by applicable law, the Board, in its sole discretion, may determine that the delivery of Common Stock or the payment of cash, upon the exercise, vesting or settlement of all or a portion of any Award may be deferred and may establish programs and procedures for deferral elections to be made by Participants. Deferrals by Participants will be made in accordance with Section 409A of the Code (to the extent applicable to a Participant). Consistent with Section 409A of the Code, the Board may provide for distributions while a Participant is still an employee or otherwise providing services to the Company. The Board is authorized to make deferrals of Awards and determine when, and in what annual percentages, Participants may receive payments, including lump sum payments, following the Participant's termination of Continuous Service, and implement such other terms and conditions consistent with the provisions of the Plan and in accordance with applicable law.

(k) Compliance with Section 409A. Unless otherwise expressly provided for in an Award Agreement, the Plan and Award Agreements will be interpreted to the greatest extent possible in a manner that makes the Plan and the Awards granted hereunder exempt from Section 409A of the Code, and, to the extent not so exempt, in compliance with Section 409A of the Code. If the Board determines that any Award granted hereunder is not exempt from and is therefore subject to Section 409A of the Code, the Award Agreement evidencing such Award will incorporate the terms and conditions necessary to avoid the consequences specified in Section 409A(a)(1) of the Code, and to the extent an Award Agreement is silent on terms necessary for compliance, such terms are hereby incorporated by reference into the Award Agreement. Notwithstanding anything to the contrary in this Plan (and unless the Award Agreement specifically provides otherwise), if the shares of Common Stock are publicly traded, and if a Participant holding an Award that constitutes "deferred compensation" under Section 409A of the Code is a "specified employee" for purposes of Section 409A of the Code, no distribution or payment of any amount that is due because of a "separation from service" (as defined in Section 409A of the Code without regard to alternative definitions thereunder) will be issued or paid before the date that is six (6) months following the date of such Participant's "separation from service" or, if earlier, the date of the Participant's death, unless such distribution or payment can be made in a manner that complies with Section 409A of the Code, and any amounts so deferred will be paid in a lump sum on the day after such six (6) month period elapses, with the balance paid thereafter on the original schedule.

(l) Clawback/Recovery. All Awards granted under the Plan will be subject to recoupment in accordance with any clawback policy that the Company is required to adopt pursuant to the listing standards of any national securities exchange or association on which the Company's securities are listed or as is otherwise required by the Dodd-Frank Wall Street Reform and Consumer Protection Act or other applicable law. In addition, the Board may impose such other clawback, recovery or recoupment provisions in an Award Agreement as the Board determines necessary or appropriate, including but not limited to a reacquisition right in respect of previously acquired shares of Common Stock or other cash or property upon the occurrence of an event constituting Cause. No recovery of compensation under such a clawback policy will be an event giving rise to a right to resign for "good reason" or "constructive termination" (or similar term) under any agreement with the Company or an Affiliate.

9. ADJUSTMENTS UPON CHANGES IN COMMON STOCK; OTHER CORPORATE EVENTS.

(a) Capitalization Adjustments. In the event of a Capitalization Adjustment, the Board will appropriately and proportionately adjust: (i) the class(es) and maximum number of securities subject to the Plan pursuant to Section 3(a), (ii) the class(es) and maximum number of securities that may be issued pursuant to the exercise of Incentive Stock Options pursuant to Section 3(c), (iii) the class(es) and maximum number of securities that may be awarded to any person pursuant to Sections 3(d), and (iv) the class(es) and number of securities and price per share of stock subject to outstanding Stock Awards. The Board will make such adjustments, and its determination will be final, binding and conclusive.

(b) Dissolution or Liquidation. Except as otherwise provided in the Stock Award Agreement, in the event of a dissolution or liquidation of the Company, all outstanding Stock Awards (other than Stock Awards consisting of vested and outstanding shares of Common Stock not subject to a forfeiture condition or the Company's right of repurchase) will terminate immediately prior to the completion of such dissolution or liquidation, and the shares of Common Stock subject to the Company's repurchase rights or subject to a forfeiture condition may be repurchased or reacquired by the Company notwithstanding the fact that the holder of such Stock Award is providing Continuous Service; *provided*, *however*, that the Board may, in its sole discretion, cause some or all Stock Awards to become fully vested, exercisable and/or no longer subject to repurchase or forfeiture (to the extent such Stock Awards have not previously expired or terminated) before the dissolution or liquidation is completed but contingent on its completion.

(c) Corporate Transaction. The following provisions will apply to Stock Awards in the event of a Corporate Transaction unless otherwise provided in the instrument evidencing the Stock Award or any other written agreement between the Company or any Affiliate and the Participant or unless otherwise expressly provided by the Board at the time of grant of a Stock Award. In the event of a Corporate Transaction, then, notwithstanding any other provision of the Plan, the Board will take one or more of the following actions with respect to Stock Awards, contingent upon the closing or completion of the Corporate Transaction:

(i) arrange for the surviving corporation or acquiring corporation (or the surviving or acquiring corporation's parent company) to assume or continue the Stock Award or to substitute a similar stock award for the Stock Award (including, but not limited to, an award to acquire the same consideration paid to the stockholders of the Company pursuant to the Corporate Transaction);

(ii) arrange for the assignment of any reacquisition or repurchase rights held by the Company in respect of Common Stock issued pursuant to the Stock Award to the surviving corporation or acquiring corporation (or the surviving or acquiring corporation's parent company);

(iii) accelerate the vesting, in whole or in part, of the Stock Award (and, if applicable, the time at which the Stock Award may be exercised) to a date prior to the effective time of such Corporate Transaction as the Board determines (or, if the Board does not determine such a date, to the date that is five (5) days prior to the effective date of the Corporate Transaction), with such Stock Award terminating if not exercised (if applicable) at or prior to the effective time of the Corporate Transaction;

(iv) arrange for the lapse, in whole or in part, of any reacquisition or repurchase rights held by the Company with respect to the Stock Award;

(v) cancel or arrange for the cancellation of the Stock Award, to the extent not vested or not exercised prior to the effective time of the Corporate Transaction, in exchange for such cash consideration, if any, as the Board, in its sole discretion, may consider appropriate; and

(vi) cancel or arrange for the cancellation of the Stock Award, to the extent not vested or not exercised prior to the effective time of the Corporate Transaction, in exchange for a payment, in such form as may be determined by the Board, equal to the excess, if any, of (A) the value of the property the Participant would have received upon the exercise of the Stock Award immediately prior to the effective time of the Corporate Transaction, over (B) any exercise price payable by such holder in connection with such exercise.

(vii) The Board need not take the same action or actions with respect to all Stock Awards or portions thereof or with respect to all Participants. The Board may take different actions with respect to the vested and unvested portions of a Stock Award.

(d) Change in Control. A Stock Award may be subject to additional acceleration of vesting and exercisability upon or after a Change in Control as may be provided in the Stock Award Agreement for such Stock Award or as may be provided in any other written agreement between the Company or any Affiliate and the Participant, but in the absence of such provision, no such acceleration will occur.

10. TERMINATION OR SUSPENSION OF THE PLAN.

(a) The Board may suspend or terminate the Plan at any time. No Incentive Stock Options may be granted after the tenth anniversary of the earlier of (i) the date the Plan is adopted by the Board (the "***Adoption Date***"), and (ii) the date the Plan is approved by the stockholders of the Company. No Awards may be granted under the Plan while the Plan is suspended or after it is terminated.

11. EXISTENCE OF THE PLAN; TIMING OF FIRST GRANT OR EXERCISE.

The Plan will come into existence on the Adoption Date; *provided*, *however*, that no Award may be granted prior to the IPO Date (that is, the Effective Date). In addition, no Stock Award will be exercised (or, in the case of a Restricted Stock Award, Restricted Stock Unit Award, Performance Stock Award, or Other Stock Award, will be granted) and no Performance Cash Award will be settled unless and until the Plan has been approved by the stockholders of the Company, which approval will be within 12 months after the Adoption Date.

12. CHOICE OF LAW.

The law of the State of Delaware will govern all questions concerning the construction, validity and interpretation of this Plan, without regard to that state's conflict of laws rules.

13. DEFINITIONS. As used in the Plan, the following definitions will apply to the capitalized terms indicated below:

(a) "***Affiliate***" means, at the time of determination, any "parent" or "subsidiary" of the Company as such terms are defined in Rule 405 of the Securities Act. The Board will have the authority to determine the time or times at which "parent" or "subsidiary" status is determined within the foregoing definition.

(b) "***Award***" means a Stock Award or a Performance Cash Award.

(c) "***Award Agreement***" means a written agreement between the Company and a Participant evidencing the terms and conditions of an Award.

(d) "***Board***" means the Board of Directors of the Company.

(e) "***Capitalization Adjustment***" means any change that is made in, or other events that occur with respect to, the Common Stock subject to the Plan or subject to any Stock Award after the Adoption Date without the receipt of consideration by the Company through merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, large non-recurring cash dividend, stock split, reverse stock split, liquidating dividend, combination of shares, exchange of shares, change in corporate structure or any similar equity restructuring transaction, as that term is used in Financial Accounting Standards Board Accounting Standards Codification Topic 718 (or any successor thereto). Notwithstanding the foregoing, the conversion of any convertible securities of the Company will not be treated as a Capitalization Adjustment.

(f) ***"Capital Stock"*** means each and every class of common stock of the Company, regardless of the number of votes per share.

(g) "***Cause***" will have the meaning ascribed to such term in any written agreement between the Participant and the Company defining such term and, in the absence of such agreement, such term will mean, with respect to a Participant, the occurrence of any one or more of the following events: (i) Participant's conviction of, or plea of nolo contendere to, any felony or to any crime·or offense causing substantial harm to the Company or its Affiliates or involving acts of theft fraud, embezzlement, moral turpitude or similar conduct; (ii) Participant's repeated intoxication by alcohol or drugs during the performance of Participant's duties in a manner that materially and adversely affects Participant's performance of such duties; (iii) malfeasance in the conduct of Participant's duties, including, but not limited to (A) willful and intentional misuse or diversion of funds of the Company or its Affiliates, (B) embezzlement, (C) fraudulent or willful and material misrepresentations or concealments on any written reports submitted to the Company or its Affiliates, or (D) any unauthorized use or disclosure of any confidential information or trade secrets of the Company or any Affiliate; (iv) Participant's material violation of any provision of an agreement between Participant and the Company; or (v) Participant's material failure to perform the duties of Participant's employment or engagement or material failure to follow or comply with the reasonable and lawful written directives of the Board or CEO of the Company or with the written employment policies of the Company. Cause shall be determined by the Administrator in its sole discretion.

(h) "***Change in Control***" means the occurrence, in a single transaction or in a series of related transactions, of any one or more of the following events:

(i) any Exchange Act Person becomes the Owner, directly or indirectly, of securities of the Company representing more than 50% of the combined voting power of the Company's then outstanding securities other than by virtue of a merger, consolidation or similar transaction. Notwithstanding the foregoing, a Change in Control will not be deemed to occur (A) on account of the acquisition of securities of the Company directly from the Company; (B) on account of the acquisition of securities of the Company by an investor, any affiliate thereof or any other Exchange Act Person that acquires the Company's securities in a transaction or series of related transactions the primary purpose of which is to obtain financing for the Company through the issuance of equity securities; or (C) solely because the level of Ownership held by any Exchange Act Person (the "***Subject Person***") exceeds the designated percentage threshold of the outstanding voting securities as a result of a repurchase or other acquisition of voting securities by the Company reducing the number of shares outstanding, provided that if a Change in Control would occur (but for the operation of this sentence) as a result of the acquisition of voting securities by the Company, and after such share acquisition, the Subject Person becomes the Owner of any additional voting securities that, assuming the repurchase or other acquisition had not occurred, increases the percentage of the then outstanding voting securities Owned by the Subject Person over the designated percentage threshold, then a Change in Control will be deemed to occur;

(ii) there is consummated a merger, consolidation or similar transaction involving (directly or indirectly) the Company and, immediately after the consummation of such merger, consolidation or similar transaction, the stockholders of the Company immediately prior thereto do not Own, directly or indirectly, either (A) outstanding voting securities representing more than 50% of the combined outstanding voting power of the surviving Entity in such merger, consolidation or similar transaction or (B) more than 50% of the combined outstanding voting power of the parent of the surviving Entity in such merger, consolidation or similar transaction, in each case in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such transaction;

(iii) there is consummated a sale, lease, exclusive license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries, other than a sale, lease, license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries to an Entity, more than fifty percent (50%) of the combined voting power of the voting securities of which are Owned by stockholders of the Company in substantially the same proportions as their Ownership of the outstanding voting securities of the Company immediately prior to such sale, lease, license or other disposition; or

(iv) individuals who, on the date the Plan is adopted by the Board, are members of the Board (the "***Incumbent Board***") cease for any reason to constitute at least a majority of the members of the Board; *provided*, *however*, that if the appointment or election (or nomination for election) of any new Board member was approved or recommended by a majority vote of the members of the Incumbent Board then still in office, such new member will, for purposes of this Plan, be considered as a member of the Incumbent Board.

For purposes of determining voting power under the term Change in Control, voting power shall be calculated by assuming the conversion of all equity securities convertible (immediately or at some future time) into shares entitled to vote, but not assuming the exercise of any warrant or right to subscribe to or purchase those shares. In addition, (A) the term Change in Control will not include a sale of assets, merger or other transaction effected exclusively for the purpose of changing the domicile of the Company, (B) the term Change in Control will not include a change in the voting power of any one or more stockholders as a result of the conversion of any class of the Company's securities into another class of the Company's securities having a different number of votes per share pursuant to the conversion provisions set forth in the Company's Amended and Restated Certificate of Incorporation, and (C) the definition of Change in Control (or any analogous term) in an individual written agreement between the Company or any Affiliate and the Participant will supersede the foregoing definition with respect to Awards subject to such agreement; *provided*, *however*, that if no definition of Change in Control or any analogous term is set forth in such an individual written agreement, the foregoing definition will apply. If required for compliance with Section 409A of the Code, in no event will a Change in Control be deemed to have occurred if such transaction is not also a "change in the ownership or effective control of" the Company or "a change in the ownership of a substantial portion of the assets of" the Company as determined under Treasury Regulation Section 1.409A-3(i)(5) (without regard to any alternative definition thereunder). The Board may, in its sole discretion and without a Participant's consent, amend the definition of "Change in Control" to conform to the definition of "Change in Control" under Section 409A of the Code, and the regulations thereunder.

(i) "***Code***" means the Internal Revenue Code of 1986, as amended, including any applicable regulations and guidance thereunder.

(j) "***Committee***" means a committee of one or more Directors to whom authority has been delegated by the Board in accordance with Section 2(c).

(k) "***Common Stock***" means, as of the IPO Date, the common stock of the Company, having one vote per share.

(l) "***Company***" means Aduro Biotech, Inc., a Delaware corporation.

(m) "***Consultant***" means any person, including an advisor, who is (i) engaged by the Company or an Affiliate to render consulting or advisory services and is compensated for such services, or (ii) serving as a member of the board of directors of an Affiliate and is compensated for such services. However, service solely as a Director, or payment of a fee for such service, will not cause a Director to be considered a "Consultant" for purposes of the Plan. Notwithstanding the foregoing, a person is treated as a Consultant under this Plan only if a Form S-8 Registration Statement under the Securities Act is available to register either the offer or the sale of the Company's securities to such person.

(n) "***Continuous Service***" means that the Participant's service with the Company or an Affiliate, whether as an Employee, Director or Consultant, is not interrupted or terminated. A change in the capacity in which the Participant renders service to the Company or an Affiliate as an Employee, Consultant or Director or a change in the entity for which the Participant renders

such service, provided that there is no interruption or termination of the Participant's service with the Company or an Affiliate, will not terminate a Participant's Continuous Service; *provided*, *however*, that if the Entity for which a Participant is rendering services ceases to qualify as an Affiliate, as determined by the Board, in its sole discretion, such Participant's Continuous Service will be considered to have terminated on the date such Entity ceases to qualify as an Affiliate. To the extent permitted by law, the Board or the chief executive officer of the Company, in that party's sole discretion, may determine whether Continuous Service will be considered interrupted in the case of (i) any leave of absence approved by the Board or chief executive officer, including sick leave, military leave or any other personal leave, or (ii) transfers between the Company, an Affiliate, or their successors. Notwithstanding the foregoing, a leave of absence will be treated as Continuous Service for purposes of vesting in an Award only to such extent as may be provided in the Company's leave of absence policy, in the written terms of any leave of absence agreement or policy applicable to the Participant, or as otherwise required by law. In addition, to the extent required for exemption from or compliance with Section 409A of the Code, the determination of whether there has been a termination of Continuous Service will be made, and such term will be construed, in a manner that is consistent with the definition of "separation from service" as defined under Treasury Regulation Section 1.409A-1(h) (without regard to any alternative definition thereunder).

(o) "***Corporate Transaction***" means the occurrence, in a single transaction or in a series of related transactions, of any one or more of the following events:

(i) the consummation of a sale or other disposition of all or substantially all, as determined by the Board, in its sole discretion, of the consolidated assets of the Company and its Subsidiaries;

(ii) the consummation of a sale or other disposition of at least 90% of the outstanding securities of the Company;

(iii) the consummation of a merger, consolidation or similar transaction following which the Company is not the surviving corporation; or

(iv) the consummation of a merger, consolidation or similar transaction following which the Company is the surviving corporation but the shares of Common Stock outstanding immediately preceding the merger, consolidation or similar transaction are converted or exchanged by virtue of the merger, consolidation or similar transaction into other property, whether in the form of securities, cash or otherwise.

To the extent required for compliance with Section 409A of the Code, in no event will an event be deemed a Corporate Transaction if such transaction is not also a "change in the ownership or effective control of" the Company or "a change in the ownership of a substantial portion of the assets of" the Company as determined under Treasury Regulation Section 1.409A-3(i)(5) (without regard to any alternative definition thereunder).

(p) "***Covered Employee***" will have the meaning provided in Section 162(m)(3) of the Code.

(q) "***Director***" means a member of the Board.

(r) "***Disability***" means, with respect to a Participant, the inability of such Participant to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or that has lasted or can be expected to last for a continuous period of not less than 12 months, as provided in Sections 22(e)(3) and 409A(a)(2)(c)(i) of the Code, and will be determined by the Board on the basis of such medical evidence as the Board deems warranted under the circumstances.

(s) "***Effective Date***" means the IPO Date.

(t) "***Employee***" means any person employed by the Company or an Affiliate. However, service solely as a Director, or payment of a fee for such services, will not cause a Director to be considered an "Employee" for purposes of the Plan.

(u) "***Entity***" means a corporation, partnership, limited liability company or other entity.

(v) "***Exchange Act***" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

(w) "***Exchange Act Person***" means any natural person, Entity or "group" (within the meaning of Section 13(d) or 14(d) of the Exchange Act), except that "Exchange Act Person" will not include (i) the Company or any Subsidiary of the Company, (ii) any employee benefit plan of the Company or any Subsidiary of the Company or any trustee or other fiduciary holding securities under an employee benefit plan of the Company or any Subsidiary of the Company, (iii) an underwriter temporarily holding securities pursuant to a registered public offering of such securities, (iv) an Entity Owned, directly or indirectly, by the stockholders of the Company in substantially the same proportions as their Ownership of stock of the Company; or (v) any natural person, Entity or "group" (within the meaning of Section 13(d) or 14(d) of the Exchange Act) that, as of the Effective Date, is the Owner, directly or indirectly, of securities of the Company representing more than 50% of the combined voting power of the Company's then outstanding securities.

(x) "***Fair Market Value***" means, as of any date, the value of the Common Stock determined as follows:

(i) If the Common Stock is listed on any established stock exchange or traded on any established market, the Fair Market Value of a share of Common Stock will be, unless otherwise determined by the Board, the closing sales price for such stock as quoted on such exchange or market (or the exchange or market with the greatest volume of trading in the Common Stock) on the date of determination, as reported in a source the Board deems reliable.

(ii) Unless otherwise provided by the Board, if there is no closing sales price for the Common Stock on the date of determination, then the Fair Market Value will be the closing selling price on the last preceding date for which such quotation exists.

(iii) In the absence of such markets for the Common Stock, the Fair Market Value will be determined by the Board in good faith and in a manner that complies with Sections 409A and 422 of the Code.

(y) "***Incentive Stock Option***" means an option granted pursuant to Section 5 of the Plan that is intended to be, and qualifies as, an "incentive stock option" within the meaning of Section 422 of the Code.

(z) "***IPO Date***" means the date of the underwriting agreement between the Company and the underwriter(s) managing the initial public offering of the Common Stock, pursuant to which the Common Stock is priced for the initial public offering.

(aa) "***Non-Employee Director***" means a Director who either (i) is not a current employee or officer of the Company or an Affiliate, does not receive compensation, either directly or indirectly, from the Company or an Affiliate for services rendered as a consultant or in any capacity other than as a Director (except for an amount as to which disclosure would not be required under Item 404(a) of Regulation S-K promulgated pursuant to the Securities Act ("***Regulation S-K***")), does not possess an interest in any other transaction for which disclosure would be required under Item 404(a) of Regulation S-K, and is not engaged in a business relationship for which disclosure would be required pursuant to Item 404(b) of Regulation S-K; or (ii) is otherwise considered a "non-employee director" for purposes of Rule 16b-3.

(bb) "***Nonstatutory Stock Option***" means any option granted pursuant to Section 5 of the Plan that does not qualify as an Incentive Stock Option.

(cc) "***Officer***" means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act.

(dd) "***Option***" means an Incentive Stock Option or a Nonstatutory Stock Option to purchase shares of Common Stock granted pursuant to the Plan.

(ee) "***Option Agreement***" means a written agreement between the Company and an Optionholder evidencing the terms and conditions of an Option grant. Each Option Agreement will be subject to the terms and conditions of the Plan.

(ff) "***Optionholder***" means a person to whom an Option is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Option.

(gg) "***Other Stock Award***" means an award based in whole or in part by reference to the Common Stock which is granted pursuant to the terms and conditions of Section 6(d).

(hh) "***Other Stock Award Agreement***" means a written agreement between the Company and a holder of an Other Stock Award evidencing the terms and conditions of an Other Stock Award grant. Each Other Stock Award Agreement will be subject to the terms and conditions of the Plan.

(ii) "***Outside Director***" means a Director who either (i) is not a current employee of the Company or an "affiliated corporation" (within the meaning of Treasury Regulations promulgated under Section 162(m) of the Code), is not a former employee of the Company or an "affiliated corporation" who receives compensation for prior services (other than benefits under a tax-qualified retirement plan) during the taxable year, has not been an officer of the Company or an "affiliated corporation," and does not receive remuneration from the Company or an "affiliated corporation," either directly or indirectly, in any capacity other than as a Director, or (ii) is otherwise considered an "outside director" for purposes of Section 162(m) of the Code.

(jj) "***Own,***" "***Owned,***" "***Owner,***" "***Ownership***" A person or Entity will be deemed to "Own," to have "Owned," to be the "Owner" of, or to have acquired "Ownership" of securities if such person or Entity, directly or indirectly, through any contract, arrangement, understanding, relationship or otherwise, has or shares voting power, which includes the power to vote or to direct the voting, with respect to such securities.

(kk) "***Parent***" means any corporation (other than the Company) in an unbroken chain of corporations ending with the Company, if each of the corporations other than the Company owns stock possessing 50% or more of the total combined voting power of all classes of stock in one of the other corporations in such chain. A corporation that attains the status of a Parent on a date after the adoption of the Plan shall be considered a Parent commencing as of such date.

(ll) "***Participant***" means a person to whom an Award is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Stock Award.

(mm) "***Performance Cash Award***" means an award of cash granted pursuant to the terms and conditions of Section 6(c)(ii).

(nn) "***Performance Criteria***" means the one or more criteria that the Committee (which to the extent that an Award is intended to comply with Section 162(m) of the Code shall consist solely of two or more Outside Directors in accordance with Section 162(m) of the Code) will select for purposes of establishing the Performance Goals for a Performance Period. The Performance Criteria that will be used to establish such Performance Goals may be based on any one of, or combination of, the following as determined by the Committee (which to the extent that an Award is intended to comply with Section 162(m) of the Code shall consist solely of two or more Outside Directors in accordance with Section 162(m) of the Code): (i) earnings (including earnings per share and net earnings); (ii) earnings before interest, taxes and depreciation; (iii) earnings before interest, taxes, depreciation and amortization; (iv) earnings before interest, taxes, depreciation, amortization and legal settlements; (v) earnings before interest, taxes, depreciation, amortization, legal settlements and other income (expense); (vi) earnings before interest, taxes, depreciation, amortization, legal settlements, other income (expense) and stock-based compensation; (vii) earnings before interest, taxes, depreciation, amortization, legal settlements, other income (expense), stock-based compensation and changes in deferred revenue; (viii) total stockholder return; (ix) return on equity or average stockholder's equity; (x) return on assets, investment, or capital employed; (xi) stock price; (xii) margin (including gross margin); (xiii) income (before or after taxes); (xiv) operating income; (xv) operating income after taxes; (xvi) pre-tax profit; (xvii) operating cash flow; (xviii) sales or revenue targets; (xix) increases in revenue or product revenue; (xx) expenses and cost reduction goals; (xxi) improvement in or attainment of working capital levels; (xxii) economic value added (or an equivalent metric); (xxiii) market share; (xxiv) cash flow; (xxv) cash flow per share; (xxvi) share price performance; (xxvii) debt reduction; (xxviii) implementation or completion of projects or processes; (xxix) employee retention; (xxx) stockholders' equity; (xxxi) capital expenditures; (xxxii) debt levels; (xxxiii) operating profit or net operating profit; (xxxiv) workforce diversity; (xxxv) growth of net income or operating income; (xxxvi) billings; (xxxvii)

bookings; (xxxviii) initiation or completion of phases of clinical trials and/or studies by specified dates; (xxxix) patient enrollment rates, (xxxx) budget management; (xxxxi) regulatory body approval with respect to products, studies and/or trials; (xxxxii) commercial launch of products; and (xxxxiii) to the extent that an Award is not intended to comply with Section 162(m) of the Code, other measures of performance selected by the Board.

(oo) "***Performance Goals***" means, for a Performance Period, the one or more goals established by the Board for the Performance Period based upon the Performance Criteria. Performance Goals may be based on a Company-wide basis, with respect to one or more business units, divisions, Affiliates, or business segments, and in either absolute terms or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. Unless specified otherwise by the Board (i) in the Award Agreement at the time the Award is granted or (ii) in such other document setting forth the Performance Goals at the time the Performance Goals are established, the Board will appropriately make adjustments in the method of calculating the attainment of Performance Goals for a Performance Period as follows: (1) to exclude restructuring and/or other nonrecurring charges; (2) to exclude exchange rate effects; (3) to exclude the effects of changes to generally accepted accounting principles; (4) to exclude the effects of any statutory adjustments to corporate tax rates; (5) to exclude the effects of any "extraordinary items" as determined under generally accepted accounting principles; (6) to exclude the dilutive effects of acquisitions or joint ventures; (7) to assume that any business divested by the Company achieved performance objectives at targeted levels during the balance of a Performance Period following such divestiture; (8) to exclude the effect of any change in the outstanding shares of common stock of the Company by reason of any stock dividend or split, stock repurchase, reorganization, recapitalization, merger, consolidation, spin-off, combination or exchange of shares or other similar corporate change, or any distributions to common stockholders other than regular cash dividends; (9) to exclude the effects of stock based compensation and the award of bonuses under the Company's bonus plans; (10) to exclude costs incurred in connection with potential acquisitions or divestitures that are required to expensed under generally accepted accounting principles; (11) to exclude the goodwill and intangible asset impairment charges that are required to be recorded under generally accepted accounting principles; (12) to exclude the effect of any other unusual, non-recurring gain or loss or other extraordinary item; (13) to exclude the effects of the timing of acceptance for review and/or approval of submissions to the Food and Drug Administration or any other regulatory body and (14) to exclude the effects of entering into or achieving milestones involved in licensing joint ventures. In addition, the Board retains the discretion to reduce or eliminate the compensation or economic benefit due upon attainment of Performance Goals and to define the manner of calculating the Performance Criteria it selects to use for such Performance Period. Partial achievement of the specified criteria may result in the payment or vesting corresponding to the degree of achievement as specified in the Stock Award Agreement or the written terms of a Performance Cash Award.

(pp) "***Performance Period***" means the period of time selected by the Board over which the attainment of one or more Performance Goals will be measured for the purpose of determining a Participant's right to and the payment of a Stock Award or a Performance Cash Award. Performance Periods may be of varying and overlapping duration, at the sole discretion of the Board.

(qq) "***Performance Stock Award***" means a Stock Award granted under the terms and conditions of Section 6(c)(i).

(rr) "***Plan***" means this Aduro Biotech, Inc. 2015 Equity Incentive Plan.

(ss) "***Restricted Stock Award***" means an award of shares of Common Stock which is granted pursuant to the terms and conditions of Section 6(a).

(tt) "***Restricted Stock Award Agreement***" means a written agreement between the Company and a holder of a Restricted Stock Award evidencing the terms and conditions of a Restricted Stock Award grant. Each Restricted Stock Award Agreement will be subject to the terms and conditions of the Plan.

(uu) "***Restricted Stock Unit Award***" means a right to receive shares of Common Stock which is granted pursuant to the terms and conditions of Section 6(b).

(vv) "***Restricted Stock Unit Award Agreement***" means a written agreement between the Company and a holder of a Restricted Stock Unit Award evidencing the terms and conditions of a Restricted Stock Unit Award grant. Each Restricted Stock Unit Award Agreement will be subject to the terms and conditions of the Plan.

(ww) "***Rule 16b-3***" means Rule 16b-3 promulgated under the Exchange Act or any successor to Rule 16b-3, as in effect from time to time.

(xx) "***Securities Act***" means the Securities Act of 1933, as amended.

(yy) "***Stock Appreciation Right***" or "***SAR***" means a right to receive the appreciation on Common Stock that is granted pursuant to the terms and conditions of Section 5.

(zz) "***Stock Appreciation Right Agreement***" means a written agreement between the Company and a holder of a Stock Appreciation Right evidencing the terms and conditions of a Stock Appreciation Right grant. Each Stock Appreciation Right Agreement will be subject to the terms and conditions of the Plan.

(aaa) "***Stock Award***" means any right to receive Common Stock granted under the Plan, including an Incentive Stock Option, a Nonstatutory Stock Option, a Restricted Stock Award, a Restricted Stock Unit Award, a Stock Appreciation Right, a Performance Stock Award or any Other Stock Award.

(bbb) "***Stock Award Agreement***" means a written agreement between the Company and a Participant evidencing the terms and conditions of a Stock Award grant. Each Stock Award Agreement will be subject to the terms and conditions of the Plan.

(ccc) "***Subsidiary***" means, with respect to the Company, (i) any corporation of which more than 50% of the outstanding capital stock having ordinary voting power to elect a majority of the board of directors of such corporation (irrespective of whether, at the time, stock of any other class or classes of such corporation will have or might have voting power by reason of the happening of any contingency) is at the time, directly or indirectly, Owned by the Company, and

(ii) any partnership, limited liability company or other entity in which the Company has a direct or indirect interest (whether in the form of voting or participation in profits or capital contribution) of more than 50%.

(ddd) "***Ten Percent Stockholder***" means a person who Owns (or is deemed to Own pursuant to Section 424(d) of the Code) stock possessing more than ten percent of the total combined voting power of all classes of stock of the Company or any Affiliate.

ADURO BIOTECH, INC.
2015 EQUITY INCENTIVE PLAN

STOCK OPTION GRANT NOTICE

Aduro Biotech, Inc. (the "***Company***"), pursuant to its 2015 Equity Incentive Plan (the "***Plan***"), hereby grants to Optionholder an option to purchase the number of shares of the Company's Common Stock set forth below. This option is subject to all of the terms and conditions as set forth in this notice, in the Option Agreement, the Plan and the Notice of Exercise, all of which are attached hereto and incorporated herein in their entirety. Capitalized terms not explicitly defined herein but defined in the Plan or the Option Agreement will have the same definitions as in the Plan or the Option Agreement. If there is any conflict between the terms in this notice and the Plan, the terms of the Plan will control.

Optionholder:	
Date of Grant:	
Vesting Commencement Date:	
Number of Shares Subject to Option:	
Exercise Price (Per Share):	
Total Exercise Price:	
Expiration Date:	

Type of Grant: ☐ Incentive Stock Option[1] ☐ Nonstatutory Stock Option

Exercise Schedule: Same as Vesting Schedule

Vesting Schedule: **[**]

Payment: By one or a combination of the following items (described in the Option Agreement):

☐ By cash, check, bank draft or money order payable to the Company
☐ Pursuant to a Regulation T Program if the shares are publicly traded
☐ By delivery of already-owned shares if the shares are publicly traded
☐ If and only to the extent this option is a Nonstatutory Stock Option, and subject to the Company's consent at the time of exercise, by a "net exercise" arrangement

Additional Terms/Acknowledgements: Optionholder acknowledges receipt of, and understands and agrees to, this Stock Option Grant Notice, the Option Agreement and the Plan. Optionholder acknowledges and agrees that this Stock Option Grant Notice and the Option Agreement may not be modified, amended or revised except as provided in the Plan. Optionholder further acknowledges that as of the Date of Grant, this Stock Option Grant Notice, the Option Agreement, and the Plan set forth the entire understanding between Optionholder and the Company regarding this option award and supersede all prior oral and written agreements, promises and/or representations on that subject with the exception

[1] If this is an Incentive Stock Option, it (plus other outstanding Incentive Stock Options) cannot be first *exercisable* for more than $100,000 in value (measured by exercise price) in any calendar year. Any excess over $100,000 is a Nonstatutory Stock Option.

of (i) options previously granted and delivered to Optionholder, (ii) any compensation recovery policy that is adopted by the Company or is otherwise required by applicable law and (iii) any written employment or severance arrangement that would provide for vesting acceleration of this option upon the terms and conditions set forth therein.

By accepting this option, Optionholder consents to receive such documents by electronic delivery and to participate in the Plan through an online or electronic system established and maintained by the Company or another third party designated by the Company.

ADURO BIOTECH, INC.	**OPTIONHOLDER:**
By: _____	_____
Signature	Signature
Title: _____	Date: _____
Date: _____	

ATTACHMENTS: Option Agreement, 2015 Equity Incentive Plan and Notice of Exercise

ATTACHMENT I

OPTION AGREEMENT

ADURO BIOTECH, INC.
2015 EQUITY INCENTIVE PLAN

OPTION AGREEMENT
(INCENTIVE STOCK OPTION OR NONSTATUTORY STOCK OPTION)

Pursuant to your Stock Option Grant Notice ("***Grant Notice***") and this Option Agreement, Aduro Biotech, Inc. (the "***Company***") has granted you an option under its 2015 Equity Incentive Plan (the "***Plan***") to purchase the number of shares of the Company's Common Stock indicated in your Grant Notice at the exercise price indicated in your Grant Notice. The option is granted to you effective as of the date of grant set forth in the Grant Notice (the "***Date of Grant***"). If there is any conflict between the terms in this Option Agreement and the Plan, the terms of the Plan will control. Capitalized terms not explicitly defined in this Option Agreement or in the Grant Notice but defined in the Plan will have the same definitions as in the Plan.

The details of your option, in addition to those set forth in the Grant Notice and the Plan, are as follows:

1. VESTING. Subject to the provisions contained herein, your option will vest as provided in your Grant Notice. Vesting will cease upon the termination of your Continuous Service.

2. NUMBER OF SHARES AND EXERCISE PRICE. The number of shares of Common Stock subject to your option and your exercise price per share in your Grant Notice will be adjusted for Capitalization Adjustments.

3. EXERCISE RESTRICTION FOR NON-EXEMPT EMPLOYEES. If you are an Employee eligible for overtime compensation under the Fair Labor Standards Act of 1938, as amended (that is, a "***Non-Exempt Employee***"), and except as otherwise provided in the Plan, you may not exercise your option until you have completed at least six (6) months of Continuous Service measured from the Date of Grant, even if you have already been an employee for more than six (6) months. Consistent with the provisions of the Worker Economic Opportunity Act, you may exercise your option as to any vested portion prior to such six (6) month anniversary in the case of (i) your death or disability, (ii) a Corporate Transaction in which your option is not assumed, continued or substituted, (iii) a Change in Control or (iv) your termination of Continuous Service on your "retirement" (as defined in the Company's benefit plans).

4. METHOD OF PAYMENT. You must pay the full amount of the exercise price for the shares you wish to exercise. You may pay the exercise price in cash or by check, bank draft or money order payable to the Company or in any other manner permitted by your Grant Notice, which may include one or more of the following:

(a) Pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board that, prior to the issuance of Common Stock, results in either the receipt of cash (or check) by the Company or the receipt of irrevocable instructions to pay the aggregate exercise price to the Company from the sales proceeds. This manner of payment is also known as a "broker-assisted exercise", "same day sale", or "sell to cover".

(b) By delivery to the Company (either by actual delivery or attestation) of already-owned shares of Common Stock that are owned free and clear of any liens, claims, encumbrances or security interests, and that are valued at Fair Market Value on the date of exercise. "Delivery" for these

purposes, in the sole discretion of the Company at the time you exercise your option, will include delivery to the Company of your attestation of ownership of such shares of Common Stock in a form approved by the Company. You may not exercise your option by delivery to the Company of Common Stock if doing so would violate the provisions of any law, regulation or agreement restricting the redemption of the Company's stock.

(c) If this option is a Nonstatutory Stock Option, subject to the consent of the Company at the time of exercise, by a "net exercise" arrangement pursuant to which the Company will reduce the number of shares of Common Stock issued upon exercise of your option by the largest whole number of shares with a Fair Market Value that does not exceed the aggregate exercise price. You must pay any remaining balance of the aggregate exercise price not satisfied by the "net exercise" in cash or other permitted form of payment. Shares of Common Stock will no longer be outstanding under your option and will not be exercisable thereafter if those shares (i) are used to pay the exercise price pursuant to the "net exercise," (ii) are delivered to you as a result of such exercise, and (iii) are withheld to satisfy your tax withholding obligations.

5. WHOLE SHARES. You may exercise your option only for whole shares of Common Stock.

6. SECURITIES LAW COMPLIANCE. In no event may you exercise your option unless the shares of Common Stock issuable upon exercise are then registered under the Securities Act or, if not registered, the Company has determined that your exercise and the issuance of the shares would be exempt from the registration requirements of the Securities Act. The exercise of your option also must comply with all other applicable laws and regulations governing your option, and you may not exercise your option if the Company determines that such exercise would not be in material compliance with such laws and regulations (including any restrictions on exercise required for compliance with Treas. Reg. 1.401(k)-1(d)(3), if applicable).

7. TERM. You may not exercise your option before the Date of Grant or after the expiration of the option's term. The term of your option expires, subject to the provisions of Section 5(h) of the Plan, upon the earliest of the following:

(a) immediately upon the date on which the event giving rise to your termination of Continuous Service for Cause occurs (or, if required by law, the date of termination of Continuous Service for Cause);

(b) three (3) months after the termination of your Continuous Service for any reason other than Cause, your Disability or your death (except as otherwise provided in Section 7(d) below); *provided*, *however*, that if during any part of such three (3) month period your option is not exercisable solely because of the condition set forth in the section above relating to "Securities Law Compliance," your option will not expire until the earlier of the Expiration Date or until it has been exercisable for an aggregate period of three (3) months after the termination of your Continuous Service; *provided further,* if during any part of such three (3) month period, the sale of any Common Stock received upon exercise of your option would violate the Company's insider trading policy, then your option will not expire until the earlier of the Expiration Date or until it has been exercisable for an aggregate period of three (3) months after the termination of your Continuous Service during which the sale of the Common Stock received upon exercise of your option would not be in violation of the Company's insider trading policy. Notwithstanding the foregoing, if (i) you are a Non-Exempt Employee, (ii) your Continuous Service terminates within six (6) months after the Date of Grant, and (iii) you have vested in a portion of your option at the time of your termination of Continuous Service, your option will not expire until the earlier of (x) the later of (A) the date that is seven (7) months after the Date of Grant, and (B) the date that is three (3) months after the termination of your Continuous Service, and (y) the Expiration Date;

(c) twelve (12) months after the termination of your Continuous Service due to your Disability (except as otherwise provided in Section 7(d)) below;

(d) eighteen (18) months after your death if you die either during your Continuous Service or within three (3) months after your Continuous Service terminates for any reason other than Cause;

(e) the Expiration Date indicated in your Grant Notice; or

(f) the day before the tenth (10th) anniversary of the Date of Grant.

If your option is an Incentive Stock Option, note that to obtain the federal income tax advantages associated with an Incentive Stock Option, the Code requires that at all times beginning on the Date of Grant and ending on the day three (3) months before the date of your option's exercise, you must be an employee of the Company or an Affiliate, except in the event of your death or Disability. The Company has provided for extended exercisability of your option under certain circumstances for your benefit but cannot guarantee that your option will necessarily be treated as an Incentive Stock Option if you continue to provide services to the Company or an Affiliate as a Consultant or Director after your employment terminates or if you otherwise exercise your option more than three (3) months after the date your employment with the Company or an Affiliate terminates.

8. EXERCISE.

(a) You may exercise the vested portion of your option during its term by (i) delivering a Notice of Exercise (in a form designated by the Company) or completing such other documents and/or procedures designated by the Company for exercise and (ii) paying the exercise price and any applicable withholding taxes to the Company's Secretary, stock plan administrator, or such other person as the Company may designate, together with such additional documents as the Company may then require.

(b) By exercising your option you agree that, as a condition to any exercise of your option, the Company may require you to enter into an arrangement providing for the payment by you to the Company of any tax withholding obligation of the Company arising by reason of (i) the exercise of your option, (ii) the lapse of any substantial risk of forfeiture to which the shares of Common Stock are subject at the time of exercise, or (iii) the disposition of shares of Common Stock acquired upon such exercise.

(c) If your option is an Incentive Stock Option, by exercising your option you agree that you will notify the Company in writing within fifteen (15) days after the date of any disposition of any of the shares of the Common Stock issued upon exercise of your option that occurs within two (2) years after the Date of Grant or within one (1) year after such shares of Common Stock are transferred upon exercise of your option.

9. TRANSFERABILITY. Except as otherwise provided in this Section 9, your option is not transferable, except by will or by the laws of descent and distribution, and is exercisable during your life only by you.

(a) Certain Trusts. Upon receiving written permission from the Board or its duly authorized designee, you may transfer your option to a trust if you are considered to be the sole beneficial owner (determined under Section 671 of the Code and applicable state law) while the option is held in the trust. You and the trustee must enter into transfer and other agreements required by the Company.

(b) Domestic Relations Orders. Upon receiving written permission from the Board or its duly authorized designee, and provided that you and the designated transferee enter into transfer and other agreements required by the Company, you may transfer your option pursuant to the terms of a domestic relations order, official marital settlement agreement or other divorce or separation instrument as permitted by Treasury Regulation 1.421-1(b)(2) that contains the information required by the Company to effectuate the transfer. You are encouraged to discuss the proposed terms of any division of this option with the Company prior to finalizing the domestic relations order or marital settlement agreement to help ensure the required information is contained within the domestic relations order or marital settlement agreement. If this option is an Incentive Stock Option, this option may be deemed to be a Nonstatutory Stock Option as a result of such transfer.

(c) Beneficiary Designation. Upon receiving written permission from the Board or its duly authorized designee, you may, by delivering written notice to the Company, in a form approved by the Company and any broker designated by the Company to handle option exercises, designate a third party who, on your death, will thereafter be entitled to exercise this option and receive the Common Stock or other consideration resulting from such exercise. In the absence of such a designation, your executor or administrator of your estate will be entitled to exercise this option and receive, on behalf of your estate, the Common Stock or other consideration resulting from such exercise.

10. OPTION NOT A SERVICE CONTRACT. Your option is not an employment or service contract, and nothing in your option will be deemed to create in any way whatsoever any obligation on your part to continue in the employ of the Company or an Affiliate, or of the Company or an Affiliate to continue your employment. In addition, nothing in your option will obligate the Company or an Affiliate, their respective stockholders, boards of directors, officers or employees to continue any relationship that you might have as a Director or Consultant for the Company or an Affiliate.

11. WITHHOLDING OBLIGATIONS.

(a) At the time you exercise your option, in whole or in part, and at any time thereafter as requested by the Company, you hereby authorize withholding from payroll and any other amounts payable to you, and otherwise agree to make adequate provision for (including by means of a “same day sale” pursuant to a program developed under Regulation T as promulgated by the Federal Reserve Board to the extent permitted by the Company), any sums required to satisfy the federal, state, local and foreign tax withholding obligations of the Company or an Affiliate, if any, which arise in connection with the exercise of your option.

(b) If this option is a Nonstatutory Stock Option, then upon your request and subject to approval by the Company, and compliance with any applicable legal conditions or restrictions, the Company may withhold from fully vested shares of Common Stock otherwise issuable to you upon the exercise of your option a number of whole shares of Common Stock having a Fair Market Value, determined by the Company as of the date of exercise, not in excess of the minimum amount of tax required to be withheld by law (or such lower amount as may be necessary to avoid classification of your option as a liability for financial accounting purposes). If the date of determination of any tax withholding obligation is deferred to a date later than the date of exercise of your option, share withholding pursuant to the preceding sentence shall not be permitted unless you make a proper and timely election under Section 83(b) of the Code, covering the aggregate number of shares of Common

Stock acquired upon such exercise with respect to which such determination is otherwise deferred, to accelerate the determination of such tax withholding obligation to the date of exercise of your option. Notwithstanding the filing of such election, shares of Common Stock shall be withheld solely from fully vested shares of Common Stock determined as of the date of exercise of your option that are otherwise issuable to you upon such exercise. Any adverse consequences to you arising in connection with such share withholding procedure shall be your sole responsibility.

(c) You may not exercise your option unless the tax withholding obligations of the Company and/or any Affiliate are satisfied. Accordingly, you may not be able to exercise your option when desired even though your option is vested, and the Company will have no obligation to issue a certificate for such shares of Common Stock or release such shares of Common Stock from any escrow provided for herein, if applicable, unless such obligations are satisfied.

12. TAX CONSEQUENCES. You hereby agree that the Company does not have a duty to design or administer the Plan or its other compensation programs in a manner that minimizes your tax liabilities. You will not make any claim against the Company, or any of its Officers, Directors, Employees or Affiliates related to tax liabilities arising from your option or your other compensation. In particular, you acknowledge that this option is exempt from Section 409A of the Code only if the exercise price per share specified in the Grant Notice is at least equal to the "fair market value" per share of the Common Stock on the Date of Grant and there is no other impermissible deferral of compensation associated with the option.

13. NOTICES. Any notices provided for in your option or the Plan will be given in writing (including electronically) and will be deemed effectively given upon receipt or, in the case of notices delivered by mail by the Company to you, five (5) days after deposit in the United States mail, postage prepaid, addressed to you at the last address you provided to the Company. The Company may, in its sole discretion, decide to deliver any documents related to participation in the Plan and this option by electronic means or to request your consent to participate in the Plan by electronic means. By accepting this option, you consent to receive such documents by electronic delivery and to participate in the Plan through an on-line or electronic system established and maintained by the Company or another third party designated by the Company.

14. GOVERNING PLAN DOCUMENT. Your option is subject to all the provisions of the Plan, the provisions of which are hereby made a part of your option, and is further subject to all interpretations, amendments, rules and regulations, which may from time to time be promulgated and adopted pursuant to the Plan. If there is any conflict between the provisions of your option and those of the Plan, the provisions of the Plan will control. In addition, your option (and any compensation paid or shares issued under your option) is subject to recoupment in accordance with The Dodd–Frank Wall Street Reform and Consumer Protection Act and any implementing regulations thereunder, any clawback policy adopted by the Company and any compensation recovery policy otherwise required by applicable law.

15. OTHER DOCUMENTS. You hereby acknowledge receipt of and the right to receive a document providing the information required by Rule 428(b)(1) promulgated under the Securities Act, which includes the Plan prospectus. In addition, you acknowledge receipt of the Company's policy permitting certain individuals to sell shares only during certain "window" periods and the Company's insider trading policy, in effect from time to time.

16. EFFECT ON OTHER EMPLOYEE BENEFIT PLANS. The value of this option will not be included as compensation, earnings, salaries, or other similar terms used when calculating your benefits under any employee benefit plan sponsored by the Company or any Affiliate, except as such plan otherwise expressly provides. The Company expressly reserves its rights to amend, modify, or terminate any of the Company's or any Affiliate's employee benefit plans.

17. VOTING RIGHTS. You will not have voting or any other rights as a stockholder of the Company with respect to the shares to be issued pursuant to this option until such shares are issued to you. Upon such issuance, you will obtain full voting and other rights as a stockholder of the Company. Nothing contained in this option, and no action taken pursuant to its provisions, will create or be construed to create a trust of any kind or a fiduciary relationship between you and the Company or any other person.

18. SEVERABILITY. If all or any part of this Option Agreement or the Plan is declared by any court or governmental authority to be unlawful or invalid, such unlawfulness or invalidity will not invalidate any portion of this Option Agreement or the Plan not declared to be unlawful or invalid. Any Section of this Option Agreement (or part of such a Section) so declared to be unlawful or invalid shall, if possible, be construed in a manner which will give effect to the terms of such Section or part of a Section to the fullest extent possible while remaining lawful and valid.

19. MISCELLANEOUS.

(a) The rights and obligations of the Company under your option will be transferable to any one or more persons or entities, and all covenants and agreements hereunder will inure to the benefit of, and be enforceable by the Company's successors and assigns.

(b) You agree upon request to execute any further documents or instruments necessary or desirable in the sole determination of the Company to carry out the purposes or intent of your option.

(c) You acknowledge and agree that you have reviewed your option in its entirety, have had an opportunity to obtain the advice of counsel prior to executing and accepting your option, and fully understand all provisions of your option.

(d) This Option Agreement will be subject to all applicable laws, rules, and regulations, and to such approvals by any governmental agencies or national securities exchanges as may be required.

(e) All obligations of the Company under the Plan and this Option Agreement will be binding on any successor to the Company, whether the existence of such successor is the result of a direct or indirect purchase, merger, consolidation, or otherwise, of all or substantially all of the business and/or assets of the Company.

* * *

This Option Agreement will be deemed to be signed by you upon the signing by you of the Grant Notice to which it is attached.

ATTACHMENT II

2015 EQUITY INCENTIVE PLAN

ATTACHMENT III

NOTICE OF EXERCISE

NOTICE OF EXERCISE

Aduro Biotech, Inc.
Attention: Stock Plan Administrator
626 Bancroft Way, 3C
Berkeley, CA 94710, USA

Date of Exercise:

This constitutes notice to Aduro Biotech, Inc. (the "***Company***") under my stock option that I elect to purchase the below number of shares of Common Stock of the Company (the "***Shares***") for the price set forth below.

Type of option (check one):	Incentive ☐	Nonstatutory ☐
Stock option dated:		
Number of Shares as to which option is exercised:		
Certificates to be issued in name of:		
Total exercise price:	$	$
Cash payment delivered herewith:	$	$
Value of Shares delivered herewith:	$	$
Value of Shares pursuant to net exercise:	$	$
Regulation T Program (cashless exercise):	$	$

By this exercise, I agree (i) to provide such additional documents as you may require pursuant to the terms of the Aduro Biotech, Inc. 2015 Equity Incentive Plan, (ii) to provide for the payment by me to you (in the manner designated by you) of your withholding obligation, if any, relating to the exercise of this option, and (iii) if this exercise relates to an Incentive Stock Option, to notify you in writing within fifteen (15) days after the date of any disposition of any of the Shares issued upon exercise of this option that occurs within two (2) years after the date of grant of this option or within one (1) year after such Shares are issued upon exercise of this option.

Very truly yours,

Signature

Print Name

ADURO BIOTECH, INC.

2015 EMPLOYEE STOCK PURCHASE PLAN

ADOPTED BY THE BOARD OF DIRECTORS: MARCH 30, 2015
APPROVED BY THE STOCKHOLDERS: APRIL 1, 2015
IPO DATE/EFFECTIVE DATE: [ ], 2015

1. GENERAL; PURPOSE.

(a) The Plan provides a means by which Eligible Employees of the Company and certain designated Related Corporations may be given an opportunity to purchase shares of Common Stock. The Plan permits the Company to grant a series of Purchase Rights to Eligible Employees under an Employee Stock Purchase Plan.

(b) The Company, by means of the Plan, seeks to retain the services of such Employees, to secure and retain the services of new Employees and to provide incentives for such persons to exert maximum efforts for the success of the Company and its Related Corporations.

2. ADMINISTRATION.

(a) The Board will administer the Plan unless and until the Board delegates administration of the Plan to a Committee or Committees, as provided in Section 2(c).

(b) The Board will have the power, subject to, and within the limitations of, the express provisions of the Plan:

(i) To determine how and when Purchase Rights will be granted and the provisions of each Offering (which need not be identical).

(ii) To designate from time to time which Related Corporations of the Company will be eligible to participate in the Plan.

(iii) To construe and interpret the Plan and Purchase Rights, and to establish, amend and revoke rules and regulations for its administration. The Board, in the exercise of this power, may correct any defect, omission or inconsistency in the Plan, in a manner and to the extent it deems necessary or expedient to make the Plan fully effective.

(iv) To settle all controversies regarding the Plan and Purchase Rights granted under the Plan.

(v) To suspend or terminate the Plan at any time as provided in Section 12.

(vi) To amend the Plan at any time as provided in Section 12.

(vii) Generally, to exercise such powers and to perform such acts as it deems necessary or expedient to promote the best interests of the Company and its Related Corporations and to carry out the intent that the Plan be treated as an Employee Stock Purchase Plan.

(viii) To adopt such procedures and sub-plans as are necessary or appropriate to permit participation in the Plan by Employees who are foreign nationals or employed outside the United States.

(c) The Board may delegate some or all of the administration of the Plan to a Committee or Committees. If administration is delegated to a Committee, the Committee will have, in connection with the administration of the Plan, the powers theretofore possessed by the Board that have been delegated to the Committee, including the power to delegate to a subcommittee any of the administrative powers the Committee is authorized to exercise (and references in this Plan to the Board will thereafter be to the Committee or subcommittee), subject, however, to such resolutions, not inconsistent with the provisions of the Plan, as may be adopted from time to time by the Board. The Board may retain the authority to concurrently administer the Plan with the Committee and may, at any time, revest in the Board some or all of the powers previously delegated. Whether or not the Board has delegated administration of the Plan to a Committee, the Board will have the final power to determine all questions of policy and expediency that may arise in the administration of the Plan.

(d) All determinations, interpretations and constructions made by the Board in good faith will not be subject to review by any person and will be final, binding and conclusive on all persons.

3. SHARES OF COMMON STOCK SUBJECT TO THE PLAN.

(a) Subject to the provisions of Section 11(a) relating to Capitalization Adjustments, the maximum number of shares of Common Stock that may be issued under the Plan will not exceed 720,000 shares of Common Stock, plus the number of shares of Common Stock that are automatically added on January 1 of each year, commencing on (and including) January 1, 2016 and ending on (and including) January 1, 2025, in an amount equal to the lesser of (i) 1% of the total number of shares of Capital Stock outstanding on December 31 of the preceding fiscal year, and (ii) 1,080,000 shares of Common Stock. Notwithstanding the foregoing, the Board may act prior to the first day of any fiscal year to provide that there will be no January 1 increase in the share reserve for such fiscal year or that the increase in the share reserve for such fiscal year will be a lesser number of shares of Common Stock than would otherwise occur pursuant to the preceding sentence.

(b) If any Purchase Right granted under the Plan terminates without having been exercised in full, the shares of Common Stock not purchased under such Purchase Right will again become available for issuance under the Plan.

(c) The stock purchasable under the Plan will be shares of authorized but unissued or reacquired Common Stock, including shares repurchased by the Company on the open market.

4. GRANT OF PURCHASE RIGHTS; OFFERING.

(a) The Board may from time to time grant or provide for the grant of Purchase Rights to Eligible Employees under an Offering (consisting of one or more Purchase Periods) on an Offering Date or Offering Dates selected by the Board. Each Offering will be in such form and will contain such terms and conditions as the Board will deem appropriate, and will comply with the requirement of Section 423(b)(5) of the Code that all Employees granted Purchase Rights will have the same rights and privileges. The terms and conditions of an Offering shall be incorporated by reference into the Plan and treated as part of the Plan. The provisions of separate Offerings need not be identical, but each Offering will include (through incorporation of the provisions of this Plan by reference in the document comprising the Offering or otherwise) the period during which the Offering will be effective, which period will not exceed 27 months beginning with the Offering Date, and the substance of the provisions contained in Sections 5 through 8, inclusive.

(b) If a Participant has more than one Purchase Right outstanding under the Plan, unless he or she otherwise indicates in forms delivered to the Company: (i) each form will apply to all of his or her Purchase Rights under the Plan, and (ii) a Purchase Right with a lower exercise price (or an earlier-granted Purchase Right, if different Purchase Rights have identical exercise prices) will be exercised to the fullest possible extent before a Purchase Right with a higher exercise price (or a later-granted Purchase Right if different Purchase Rights have identical exercise prices) will be exercised.

(c) The Board will have the discretion to structure an Offering so that if the Fair Market Value of a share of Common Stock on the first Trading Day of a new Purchase Period within that Offering is less than or equal to the Fair Market Value of a share of Common Stock on the Offering Date for that Offering, then (i) that Offering will terminate immediately as of that first Trading Day, and (ii) the Participants in such terminated Offering will be automatically enrolled in a new Offering beginning on the first Trading Day of such new Purchase Period.

5. ELIGIBILITY.

(a) Purchase Rights may be granted only to Employees of the Company or, as the Board may designate in accordance with Section 2(b), to Employees of a Related Corporation. Except as provided in Section 5(b), an Employee will not be eligible to be granted Purchase Rights unless, on the Offering Date, the Employee has been in the employ of the Company or the Related Corporation, as the case may be, for such continuous period preceding such Offering Date as the Board may require, but in no event will the required period of continuous employment be equal to or greater than two years. In addition, the Board may provide that no Employee will be eligible to be granted Purchase Rights under the Plan unless, on the Offering Date, such Employee's customary employment with the Company or the Related Corporation is more than 20 hours per week and more than five months per calendar year or such other criteria as the Board may determine consistent with Section 423 of the Code.

(b) The Board may provide that each person who, during the course of an Offering, first becomes an Eligible Employee will, on a date or dates specified in the Offering which coincides with the day on which such person becomes an Eligible Employee or which occurs

thereafter, receive a Purchase Right under that Offering, which Purchase Right will thereafter be deemed to be a part of that Offering. Such Purchase Right will have the same characteristics as any Purchase Rights originally granted under that Offering, as described herein, except that:

(i) the date on which such Purchase Right is granted will be the "Offering Date" of such Purchase Right for all purposes, including determination of the exercise price of such Purchase Right;

(ii) the period of the Offering with respect to such Purchase Right will begin on its Offering Date and end coincident with the end of such Offering; and

(iii) the Board may provide that if such person first becomes an Eligible Employee within a specified period of time before the end of the Offering, he or she will not receive any Purchase Right under that Offering.

(c) No Employee will be eligible for the grant of any Purchase Rights if, immediately after any such Purchase Rights are granted, such Employee owns stock possessing five percent or more of the total combined voting power or value of all classes of stock of the Company or of any Related Corporation. For purposes of this Section 5(c), the rules of Section 424(d) of the Code will apply in determining the stock ownership of any Employee, and stock which such Employee may purchase under all outstanding Purchase Rights and options will be treated as stock owned by such Employee.

(d) As specified by Section 423(b)(8) of the Code, an Eligible Employee may be granted Purchase Rights only if such Purchase Rights, together with any other rights granted under all Employee Stock Purchase Plans of the Company and any Related Corporations, do not permit such Eligible Employee's rights to purchase stock of the Company or any Related Corporation to accrue at a rate which exceeds $25,000 of Fair Market Value of such stock (determined at the time such rights are granted, and which, with respect to the Plan, will be determined as of their respective Offering Dates) for each calendar year in which such rights are outstanding at any time.

(e) Officers of the Company and any designated Related Corporation, if they are otherwise Eligible Employees, will be eligible to participate in Offerings under the Plan. Notwithstanding the foregoing, the Board may provide in an Offering that Employees who are highly compensated Employees within the meaning of Section 423(b)(4)(D) of the Code will not be eligible to participate.

6. PURCHASE RIGHTS; PURCHASE PRICE.

(a) On each Offering Date, each Eligible Employee, pursuant to an Offering made under the Plan, will be granted a Purchase Right to purchase up to that number of shares of Common Stock purchasable either with a percentage or with a maximum dollar amount, as designated by the Board, but in either case not exceeding 15% of such Employee's earnings (as defined by the Board in each Offering) during the period that begins on the Offering Date (or such later date as the Board determines for a particular Offering) and ends on the date stated in the Offering, which date will be no later than the end of the Offering.

(b) The Board will establish one or more Purchase Dates during an Offering on which Purchase Rights granted for that Offering will be exercised and shares of Common Stock will be purchased in accordance with such Offering.

(c) In connection with each Offering made under the Plan, the Board may specify (i) a maximum number of shares of Common Stock that may be purchased by any Participant on any Purchase Date during such Offering, (ii) a maximum aggregate number of shares of Common Stock that may be purchased by all Participants pursuant to such Offering and/or (iii) a maximum aggregate number of shares of Common Stock that may be purchased by all Participants on any Purchase Date under the Offering. If the aggregate purchase of shares of Common Stock issuable upon exercise of Purchase Rights granted under the Offering would exceed any such maximum aggregate number, then, in the absence of any Board action otherwise, a pro rata (based on each Participant's accumulated Contributions) allocation of the shares of Common Stock available will be made in as nearly a uniform manner as will be practicable and equitable.

(d) The purchase price of shares of Common Stock acquired pursuant to Purchase Rights will be not less than the lesser of:

(i) an amount equal to 85% of the Fair Market Value of the shares of Common Stock on the Offering Date; and

(ii) an amount equal to 85% of the Fair Market Value of the shares of Common Stock on the applicable Purchase Date.

7. PARTICIPATION; WITHDRAWAL; TERMINATION.

(a) An Eligible Employee may elect to authorize payroll deductions as the means of making Contributions by completing and delivering to the Company, within the time specified in the Offering, an enrollment form provided by the Company. The enrollment form will specify the amount of Contributions not to exceed the maximum amount specified by the Board. Each Participant's Contributions will be credited to a bookkeeping account for such Participant under the Plan and will be deposited with the general funds of the Company except where applicable law requires that Contributions be deposited with a third party. If permitted in the Offering, a Participant may begin such Contributions with the first payroll occurring on or after the Offering Date (or, in the case of a payroll date that occurs after the end of the prior Offering but before the Offering Date of the next new Offering, Contributions from such payroll will be included in the new Offering). If permitted in the Offering, a Participant may thereafter reduce (including to zero) or increase his or her Contributions. If specifically provided in the Offering, in addition to making Contributions by payroll deductions, a Participant may make Contributions through the payment by cash or check prior to a Purchase Date.

(b) During an Offering, a Participant may cease making Contributions and withdraw from the Offering by delivering to the Company a withdrawal form provided by the Company. The Company may impose a deadline before a Purchase Date for withdrawing. Upon such withdrawal, such Participant's Purchase Right in that Offering will immediately terminate and the Company will distribute to such Participant all of his or her accumulated but unused

Contributions and such Participant's Purchase Right in that Offering shall thereupon terminate. A Participant's withdrawal from that Offering will have no effect upon his or her eligibility to participate in any other Offerings under the Plan, but such Participant will be required to deliver a new enrollment form to participate in subsequent Offerings.

(c) Purchase Rights granted pursuant to any Offering under the Plan will terminate immediately if the Participant either (i) is no longer an Employee for any reason or for no reason (subject to any post-employment participation period required by law) or (ii) is otherwise no longer eligible to participate. The Company will distribute to such individual all of his or her accumulated but unused Contributions.

(d) During a Participant's lifetime, Purchase Rights will be exercisable only by such Participant. Purchase Rights are not transferable by a Participant, except by will, by the laws of descent and distribution, or, if permitted by the Company, by a beneficiary designation as described in Section 10.

(e) Unless otherwise specified in the Offering, the Company will have no obligation to pay interest on Contributions.

8. EXERCISE OF PURCHASE RIGHTS.

(a) On each Purchase Date, each Participant's accumulated Contributions will be applied to the purchase of shares of Common Stock, up to the maximum number of shares of Common Stock permitted by the Plan and the applicable Offering, at the purchase price specified in the Offering. No fractional shares will be issued unless specifically provided for in the Offering.

(b) If any amount of accumulated Contributions remains in a Participant's account after the purchase of shares of Common Stock and such remaining amount is less than the amount required to purchase one share of Common Stock on the final Purchase Date of an Offering, then such remaining amount will be held in such Participant's account for the purchase of shares of Common Stock under the next Offering under the Plan, unless such Participant withdraws from or is not eligible to participate in such Offering, in which case such amount will be distributed to such Participant after the final Purchase Date, without interest. If the amount of Contributions remaining in a Participant's account after the purchase of shares of Common Stock is at least equal to the amount required to purchase one whole share of Common Stock on the final Purchase Date of an Offering, then such remaining amount will not roll over to the next Offering and will instead be distributed in full to such Participant after the final Purchase Date of such Offering without interest.

(c) No Purchase Rights may be exercised to any extent unless the shares of Common Stock to be issued upon such exercise under the Plan are covered by an effective registration statement pursuant to the Securities Act and the Plan is in material compliance with all applicable federal, state, foreign and other securities and other laws applicable to the Plan. If on a Purchase Date the shares of Common Stock are not so registered or the Plan is not in such compliance, no Purchase Rights will be exercised on such Purchase Date, and the Purchase Date will be delayed until the shares of Common Stock are subject to such an effective registration

statement and the Plan is in material compliance, except that the Purchase Date will in no event be more than 6 months from the Offering Date. If, on the Purchase Date, as delayed to the maximum extent permissible, the shares of Common Stock are not registered and the Plan is not in material compliance with all applicable laws, no Purchase Rights will be exercised and all accumulated but unused Contributions will be distributed to the Participants without interest.

9. COVENANTS OF THE COMPANY.

The Company will seek to obtain from each federal, state, foreign or other regulatory commission or agency having jurisdiction over the Plan such authority as may be required to grant Purchase Rights and issue and sell shares of Common Stock thereunder. If, after commercially reasonable efforts, the Company is unable to obtain the authority that counsel for the Company deems necessary for the grant of Purchase Rights or the lawful issuance and sale of Common Stock under the Plan, and at a commercially reasonable cost, the Company will be relieved from any liability for failure to grant Purchase Rights and/or to issue and sell Common Stock upon exercise of such Purchase Rights.

10. DESIGNATION OF BENEFICIARY.

(a) The Company may, but is not obligated to, permit a Participant to submit a form designating a beneficiary who will receive any shares of Common Stock and/or Contributions from the Participant's account under the Plan if the Participant dies before such shares and/or Contributions are delivered to the Participant. The Company may, but is not obligated to, permit the Participant to change such designation of beneficiary. Any such designation and/or change must be on a form approved by the Company.

(b) If a Participant dies, in the absence of a valid beneficiary designation, the Company will deliver any shares of Common Stock and/or Contributions to the executor or administrator of the estate of the Participant. If, to the knowledge of the Company, no executor or administrator has been appointed, the Company, in its sole discretion, may deliver such shares of Common Stock and/or Contributions to the Participant's spouse, dependents or relatives, or if no spouse, dependent or relative is known to the Company, then to such other person as the Company may designate.

11. ADJUSTMENTS UPON CHANGES IN COMMON STOCK; CORPORATE TRANSACTIONS.

(a) In the event of a Capitalization Adjustment, the Board will appropriately and proportionately adjust: (i) the class(es) and maximum number of securities subject to the Plan pursuant to Section 3(a), (ii) the class(es) and maximum number of securities by which the share reserve is to increase automatically each year pursuant to Section 3(a), (iii) the class(es) and number of securities subject to, and the purchase price applicable to outstanding Offerings and Purchase Rights, and (iv) the class(es) and number of securities that are the subject of the purchase limits under each ongoing Offering. The Board will make these adjustments, and its determination will be final, binding and conclusive.

(b) In the event of a Corporate Transaction, then: (i) any surviving corporation or acquiring corporation (or the surviving or acquiring corporation's parent company) may assume or continue outstanding Purchase Rights or may substitute similar rights (including a right to

acquire the same consideration paid to the stockholders in the Corporate Transaction) for outstanding Purchase Rights, or (ii) if any surviving or acquiring corporation (or its parent company) does not assume or continue such Purchase Rights or does not substitute similar rights for such Purchase Rights, then the Participants' accumulated Contributions will be used to purchase shares of Common Stock within ten business days prior to the Corporate Transaction under the outstanding Purchase Rights, and the Purchase Rights will terminate immediately after such purchase.

12. AMENDMENT, TERMINATION OR SUSPENSION OF THE PLAN.

(a) The Board may amend the Plan at any time in any respect the Board deems necessary or advisable. However, except as provided in Section 11(a) relating to Capitalization Adjustments, stockholder approval will be required for any amendment of the Plan for which stockholder approval is required by applicable law or listing requirements, including any amendment that either (i) materially increases the number of shares of Common Stock available for issuance under the Plan, (ii) materially expands the class of individuals eligible to become Participants and receive Purchase Rights, (iii) materially increases the benefits accruing to Participants under the Plan or materially reduces the price at which shares of Common Stock may be purchased under the Plan, (iv) materially extends the term of the Plan, or (v) expands the types of awards available for issuance under the Plan, but in each of (i) through (v) above only to the extent stockholder approval is required by applicable law or listing requirements.

(b) The Board may suspend or terminate the Plan at any time. No Purchase Rights may be granted under the Plan while the Plan is suspended or after it is terminated.

(c) Any benefits, privileges, entitlements and obligations under any outstanding Purchase Rights granted before an amendment, suspension or termination of the Plan will not be materially impaired by any such amendment, suspension or termination except (i) with the consent of the person to whom such Purchase Rights were granted, (ii) as necessary to comply with any laws, listing requirements, or governmental regulations (including, without limitation, the provisions of Section 423 of the Code and the regulations and other interpretive guidance issued thereunder relating to Employee Stock Purchase Plans) including without limitation any such regulations or other guidance that may be issued or amended after the date the Plan is adopted by the Board, or (iii) as necessary to obtain or maintain favorable tax, listing, or regulatory treatment. To be clear, the Board may amend outstanding Purchase Rights without a Participant's consent if such amendment is necessary to ensure that the Purchase Right and/or the Plan complies with the requirements of Section 423 of the Code.

13. EFFECTIVE DATE OF PLAN.

The Plan will become effective immediately prior to and contingent upon the IPO Date. No Purchase Rights will be exercised unless and until the Plan has been approved by the stockholders of the Company, which approval must be within 12 months before or after the date the Plan is adopted (or if required under Section 12(a) above, materially amended) by the Board.

14. MISCELLANEOUS PROVISIONS.

(a) Proceeds from the sale of shares of Common Stock pursuant to Purchase Rights will constitute general funds of the Company.

(b) A Participant will not be deemed to be the holder of, or to have any of the rights of a holder with respect to, shares of Common Stock subject to Purchase Rights unless and until the Participant's shares of Common Stock acquired upon exercise of Purchase Rights are recorded in the books of the Company (or its transfer agent).

(c) The Plan and Offering do not constitute an employment contract. Nothing in the Plan or in the Offering will in any way alter the at will nature of a Participant's employment or be deemed to create in any way whatsoever any obligation on the part of any Participant to continue in the employ of the Company or a Related Corporation, or on the part of the Company or a Related Corporation to continue the employment of a Participant.

(d) The provisions of the Plan will be governed by the laws of the State of California without resort to that state's conflicts of laws rules.

15. DEFINITIONS.

As used in the Plan, the following definitions will apply to the capitalized terms indicated below:

(a) "***Board***" means the Board of Directors of the Company.

(b) "***Capital Stock***" means each and every class of common stock of the Company, regardless of the number of votes per share.

(c) "***Capitalization Adjustment***" means any change that is made in, or other events that occur with respect to, the Common Stock subject to the Plan or subject to any Purchase Right after the date the Plan is adopted by the Board without the receipt of consideration by the Company through merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, large nonrecurring cash dividend, stock split, liquidating dividend, combination of shares, exchange of shares, change in corporate structure or other similar equity restructuring transaction, as that term is used in Financial Accounting Standards Board Accounting Standards Codification Topic 718 (or any successor thereto). Notwithstanding the foregoing, the conversion of any convertible securities of the Company will not be treated as a Capitalization Adjustment.

(d) "***Code***" means the Internal Revenue Code of 1986, as amended, including any applicable regulations and guidance thereunder.

(e) "***Committee***" means a committee of one or more members of the Board to whom authority has been delegated by the Board in accordance with Section 2(c).

(f) "***Common Stock***" means, as of the IPO Date, the common stock of the Company.

(g) "***Company***" means Aduro Biotech, Inc., a Delaware corporation.

(h) ***"Contributions***" means the payroll deductions and other additional payments specifically provided for in the Offering that a Participant contributes to fund the exercise of a Purchase Right. A Participant may make additional payments into his or her account if specifically provided for in the Offering, and then only if the Participant has not already had the maximum permitted amount withheld during the Offering through payroll deductions.

(i) "***Corporate Transaction***" means the consummation, in a single transaction or in a series of related transactions, of any one or more of the following events:

(i) a sale or other disposition of all or substantially all, as determined by the Board in its sole discretion, of the consolidated assets of the Company and its Subsidiaries;

(ii) a sale or other disposition of at least 90% of the outstanding securities of the Company;

(iii) a merger, consolidation or similar transaction following which the Company is not the surviving corporation; or

(iv) a merger, consolidation or similar transaction following which the Company is the surviving corporation but the shares of Common Stock outstanding immediately preceding the merger, consolidation or similar transaction are converted or exchanged by virtue of the merger, consolidation or similar transaction into other property, whether in the form of securities, cash or otherwise.

(j) "Director" means a member of the Board.

(k) "***Eligible Employee***" means an Employee who meets the requirements set forth in the document(s) governing the Offering for eligibility to participate in the Offering, provided that such Employee also meets the requirements for eligibility to participate set forth in the Plan.

(l) "***Employee***" means any person, including an Officer or Director, who is "employed" for purposes of Section 423(b)(4) of the Code by the Company or a Related Corporation. However, service solely as a Director, or payment of a fee for such services, will not cause a Director to be considered an "Employee" for purposes of the Plan.

(m) "***Employee Stock Purchase Plan***" means a plan that grants Purchase Rights intended to be options issued under an "employee stock purchase plan," as that term is defined in Section 423(b) of the Code.

(n) "***Exchange Act***" means the Securities Exchange Act of 1934, as amended and the rules and regulations promulgated thereunder.

(o) "Fair Market Value" means, as of any date, the value of the Common Stock determined as follows:

(i) If the Common Stock is listed on any established stock exchange or traded on any established market, the Fair Market Value of a share of Common Stock will be the closing sales price for such stock as quoted on such exchange or market (or the exchange or market with the greatest volume of trading in the Common Stock) on the date of determination, as reported in such source as the Board deems reliable. Unless otherwise provided by the Board, if there is no closing sales price for the Common Stock on the date of determination, then the Fair Market Value will be the closing sales price on the last preceding date for which such quotation exists.

(ii) In the absence of such markets for the Common Stock, the Fair Market Value will be determined by the Board in good faith in compliance with applicable laws and in a manner that complies with Sections 409A of the Code.

(iii) Notwithstanding the foregoing, for any Offering that commences on the IPO Date, the Fair Market Value of the shares of Common Stock on the Offering Date will be the price per share at which shares are first sold to the public in the Company's initial public offering as specified in the final prospectus for that initial public offering.

(p) "***IPO Date***" means the date of the underwriting agreement between the Company and the underwriter(s) managing the initial public offering of the Common Stock, pursuant to which the Common Stock is priced for the initial public offering.

(q) "***Offering***" means the grant to Eligible Employees of Purchase Rights, with the exercise of those Purchase Rights automatically occurring at the end of one or more Purchase Periods. The terms and conditions of an Offering will generally be set forth in the "***Offering Document***" approved by the Board for that Offering.

(r) "***Offering Date***" means a date selected by the Board for an Offering to commence.

(s) "***Officer***" means a person who is an officer of the Company or a Related Corporation within the meaning of Section 16 of the Exchange Act.

(t) "***Participant***" means an Eligible Employee who holds an outstanding Purchase Right.

(u) "***Plan***" means this Aduro Biotech, Inc. 2014 Employee Stock Purchase Plan.

(v) "***Purchase Date***" means one or more dates during an Offering selected by the Board on which Purchase Rights will be exercised and on which purchases of shares of Common Stock will be carried out in accordance with such Offering.

(w) "***Purchase Period***" means a period of time specified within an Offering, generally beginning on the Offering Date or on the first Trading Day following a Purchase Date, and ending on a Purchase Date. An Offering may consist of one or more Purchase Periods.

(x) "***Purchase Right***" means an option to purchase shares of Common Stock granted pursuant to the Plan.

(y) "***Related Corporation***" means any "parent corporation" or "subsidiary corporation" of the Company whether now or subsequently established, as those terms are defined in Sections 424(e) and (f), respectively, of the Code.

(z) "***Securities Act***" means the Securities Act of 1933, as amended.

(aa) "***Trading Day***" means any day on which the exchange(s) or market(s) on which shares of Common Stock are listed, including but not limited to the NYSE, Nasdaq Global Select Market, the Nasdaq Global Market, the Nasdaq Capital Market or any successors thereto, is open for trading.

ADURO BIOTECH, INC.
NON-EMPLOYEE DIRECTOR COMPENSATION POLICY
APPROVED BY THE BOARD OF DIRECTORS

MARCH 30, 2015

Each member of the Board of Directors (the "***Board***") who is not also serving as an employee of Aduro Biotech, Inc. ("***Aduro***") or any of its subsidiaries (each such member, an "***Eligible Director***") will receive the compensation described in this Non-Employee Director Compensation Policy (the "***Director Compensation Policy***") for his or her Board service following the closing of the initial public offering of the common stock of Aduro (the "***IPO***").

The Director Compensation Policy will be effective upon the date of the underwriting agreement between Aduro and the underwriters managing the initial public offering of the Class A common stock of Aduro (the "***Common Stock***"), pursuant to which the Common Stock is priced in the IPO. The Director Compensation Policy may be amended at any time in the sole discretion of the Board or the Compensation Committee of the Board.

Annual Cash Compensation

Commencing with closing of the IPO, each Eligible Director shall receive the cash compensation described below. The annual cash compensation amount set forth below is payable in equal quarterly installments, payable in arrears on the last day of each fiscal quarter in which the service occurred. If an Eligible Director joins the Board or a committee of the Board ("***Committee***") at a time other than effective as of the first day of a fiscal quarter, each annual retainer set forth below will be pro-rated based on days served in the applicable fiscal year, with the pro-rated amount paid for the first fiscal quarter in which the Eligible Director provides the service, and regular full quarterly payments thereafter. All annual cash retainer fees are vested upon payment.

1. Annual Board Service Retainer:
   a. Eligible Directors other than the Non-Executive Chairperson: $35,000
   b. Non-Executive Chairperson: $60,000

2. Annual Committee Chair Service Retainer:[1]
   a. Chairperson of the Audit Committee: $15,000
   b. Chairperson of the Compensation Committee: $10,000
   c. Chairperson of the Nominating & Corporate Governance Committee: $8,000

3. Annual Committee Member Service Retainer:
   a. Member of the Audit Committee: $7,500
   b. Member of the Compensation Committee: $5,000
   c. Member of the Nominating & Corporate Governance Committee: $4,000

[1] Eligible Directors who serve as a Committee Chair will not receive the annual retainer for service as a member on such Committee.

Equity Compensation

The equity compensation set forth below will be granted under the Aduro, Inc. 2015 Equity Incentive Plan (the "***Plan***"), and will be documented on the applicable form of equity award agreement most recently approved for use by the Board (or a duly authorized committee thereof) for Eligible Directors. All stock options granted under the Director Compensation Policy will be nonstatutory stock options, with an exercise price per share equal to 100% of the Fair Market Value (as defined in the Plan) of the underlying Common Stock on the date of grant, and a term of ten years from the date of grant (subject to earlier termination in connection with a termination of service as provided in the Plan).

1. Initial Option Grant: On the date of the Eligible Director's initial election to the Board (or, if such date is not a market trading day, the first market trading day thereafter), the Eligible Director automatically will be granted, without further action by the Board or Compensation Committee of the Board, a stock option to purchase 15,000 shares of Common Stock (the "***Initial Option Grant***"). The Initial Option Grant will vest one-third after the first year, with the remaining shares vesting quarterly in years two and three following the grant date, such that the Initial Option Grant will be fully vested on the third anniversary of the date of grant, subject to the Eligible Director's Continuous Service on each applicable vesting date. In addition, in the event of a Change in Control or a Corporate Transaction, any unvested portion of the Initial Option Grant will fully vest and become exercisable as of immediately prior to the effective time of such Change in Control or Corporate Transaction, subject to the Eligible Director's Continuous Service on the effective date of such transaction.

2. Annual Option Grant: On the date of each Aduro annual stockholder meeting held after the effective date of the IPO, each Eligible Director automatically, and without further action by the Board or Compensation Committee of the Board, will be granted a stock option to purchase 13,000 shares of Common Stock (the "***Annual Option Grant***"). The Annual Option Grant will vest quarterly over one year from the grant date, such that the Annual Option Grant will be fully vested on the first anniversary of the date of grant, subject to the Eligible Director's Continuous Service on each applicable vesting date. In addition, in the event of a Change in Control or a Corporate Transaction, any unvested portion of the Annual Option Grant will fully vest and become exercisable as of immediately prior to the effective time of such Change in Control or Corporate Transaction, subject to the Eligible Director's Continuous Service on the effective date of such transaction.

Election to Receive Annual Cash Compensation in the Form of Stock Options

Each Eligible Director may elect, in writing, to receive his or her annual cash compensation in the form of stock options. Such election would apply to all annual cash compensation payable during the subsequent year of service. If elected, all stock options will be granted under the Plan and will be documented on the applicable form of equity award agreement most recently approved for use by the Board (or a duly authorized committee thereof) for Eligible Directors. All stock options granted under the Director Compensation Policy will be nonstatutory stock options with an exercise price per share equal to 100% of the Fair Market Value (as defined in the Plan) of the underlying Common Stock on the date of grant, will be granted on the date of the annual meeting of our stockholders, will vest monthly over one year form the grant date, , and will have a term of ten years from the date of grant (subject to earlier termination in connection with a termination of service as provided in the Plan).

The number of stock options that an Eligible Director will receive in lieu of such annual cash compensation will be determined by dividing (i) the amount of annual cash compensation that would otherwise be paid during the upcoming year of service, by (ii) the Black-Scholes value of a share of Common Stock on the applicable grant date. Any election to receive stock options in lieu of annual cash compensation must be made by the Eligible Director at least five (5) business days prior to the date of the annual meeting of stockholders and such election will be irrevocable until the next annual meeting of the stockholders.

Expenses

The Company will reimburse Eligible Directors for ordinary, necessary and reasonable out-of-pocket travel expenses to cover in-person attendance at and participation in Board and/or Committee meetings; *provided*, that Eligible Directors timely submit to the Company appropriate documentation substantiating such expenses in accordance with the Company's travel and expense policy, as in effect from time to time.

Philosophy

The Director Compensation Policy is designed to attract and retain experienced, talented individuals to serve on the Board. The Board anticipates that the Board, or a duly authorized committee thereof, will generally review Eligible Director compensation on an annual basis following the IPO. The Director Compensation Policy, as amended from time to time, may take into account the time commitment expected of Eligible Directors, best practices and market rates in director compensation, the economic position of Aduro, broader economic conditions, historical compensation structure, the advice of the compensation consultant that the Compensation Committee or the Board may retain from time to time, and the potential dilutive effect of equity awards on our stockholders.

Under the Director Compensation Policy, Eligible Directors receive cash compensation in the form of retainers to recognize their level of responsibility as well as the necessary time commitment involved in serving in a leadership role and/or on Committees. Eligible Directors also receive equity compensation because we believe that stock ownership provides an incentive to act in ways that maximize long-term stockholder value. Further, we believe that stock-based awards are essential to attracting and retaining talented Board members. When stock options are granted, these stock options will have an exercise price at least equal to the Fair Market Value of Common Stock on the date of grant, so that stock options provide a return only if the Fair Market Value appreciates over the period in which the stock option vests and remains exercisable. We believe that the vesting acceleration provided in the case of a Change in Control or other Corporate Transaction is consistent with market practices and is critical to attracting and retaining high quality directors.

Exhibit 10.34

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

COLLABORATION AND LICENSE AGREEMENT

dated as of March 12, 2015

between

ADURO BIOTECH, INC.

and

NOVARTIS PHARMACEUTICALS CORPORATION

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EXHIBITS

- Exhibit 1(A) – Company Patents
- Exhibit 1(B) – Existing Third Party Licenses
- Exhibit 1(C) – Novartis Patents
- Exhibit 3.3(d) – Development Cost Sharing Percentages
- Exhibit 8.5 – Form of Sublicense Agreement
- Exhibit 10.2(b) – Complete and accurate list of all license, assignment, distribution or other agreements relating to Company Patents
- Exhibit 10.3(b) – List of [*] included within Novartis Know-How as of the Effective Date
- Exhibit 10.3(c) – Complete and accurate list of all license, assignment, distribution or other agreements relating to the Novartis Patents

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

COLLABORATION AND LICENSE AGREEMENT

This **COLLABORATION AND LICENSE AGREEMENT** (the "**Agreement**") is entered into as of March 12, 2015 (the "**Execution Date**") by and between Aduro Biotech, Inc., a Delaware corporation having its principal place of business at 626 Bancroft Way, #3C, Berkeley, CA 94710-2224 ("**Company**"), and Novartis Pharmaceuticals Corporation, a Delaware Corporation having its principal place of business in located at One Health Plaza, East Hanover, New Jersey 07936, ("**Novartis**"). Novartis and Company are sometimes referred to herein individually as a "**Party**" and collectively as the "**Parties**".

BACKGROUND

WHEREAS, Company owns or otherwise Controls (as defined below) Company Technology (as defined below) and has experience and expertise in the development of human therapeutic products utilizing Company Technology;

WHEREAS, Novartis is a global pharmaceutical company with expertise in the development, manufacture and commercialization of human therapeutic products; and

WHEREAS, each Party wishes to collaborate with the other Party regarding certain co-development and co-commercialization activities, including drawing upon the Parties' complementary expertise and resources, each on the terms and conditions set forth herein.

NOW THEREFORE, in consideration of the foregoing premises and the mutual promises, covenants and conditions contained in this Agreement, the Parties agree as follows:

Article 1
DEFINITIONS

As used in this Agreement, the following initially capitalized terms, whether used in the singular or plural form, shall have the meanings set forth in this Article 1. Unless the context of this Agreement otherwise requires: (a) words of any gender include each other gender; (b) words using the singular or plural number also include the plural or singular number, respectively; (c) the terms "hereunder," "hereof," "herein," "hereby," and derivative or similar words refer to this entire Agreement; (d) the terms "Article," "Section" or "Exhibit" refer to the specified Article, Section or Exhibit of this Agreement; (e) the terms "include," "includes" and "including" shall be deemed to be followed by the phrase "without limitation"; (f) "days" refers to calendar days; (g) all references to "U.S." or "United States" refer to the United States of America; (h) the word "will" shall be construed to have the same meaning and effect as the word "shall"; (i) any reference herein to any Person shall be construed to include the Person's successors and assigns; and (j) any definition of or reference to any agreement, instrument or other document herein shall be construed as referring to such agreement, instrument or other document as from time to time amended, supplemented or otherwise modified (subject to any restrictions on such amendments, supplements or modifications set forth herein). All accounting terms used but not otherwise defined herein shall have the meanings ascribed to such terms under the applicable Accounting Standards as applied to a Party. All references to "$" amounts hereunder shall be deemed to be U.S. Dollars and all payments due hereunder shall be made in U.S. Dollars.

1.1. "**Accounting Standards**" means, with respect to Company, U.S. GAAP, and means, with respect to Novartis, IFRS, in each case, as generally and consistently applied throughout the applicable Party's organization.

1.2. "**Acquired Party**" has the meaning set forth in Section 14.1(a).

1.3. "**Acquiring Party**" has the meaning set forth in the definition of "Change of Control."

1.4. "**Act**" has the meaning set forth in Section 9.6(c)(i).

1.5. "**Action**" has the meaning set forth in Section 9.7(a).

1.6. "**ADC**" means antibody drug conjugate.

1.7. "**Affiliate**" means, with respect to a Person, any other Person that controls, is controlled by, or is under common control with such Person. For the purpose of this definition, "control" shall mean, direct or indirect, ownership of more than fifty percent (50%) of the shares of stock entitled to vote for the election of directors in the case of a corporation, or more than fifty percent (50%) of the equity interest in the case of any other type of legal entity, status as a general partner in any partnership, or any other arrangement whereby the entity or person controls or has the right to control the board of directors or equivalent governing body of a corporation or other entity, or the ability to cause the direction of the management or policies of a corporation or other entity. In the case of entities organized under the laws of certain countries, the maximum percentage ownership permitted by law for a foreign investor may be less than fifty percent (50%), and in such case such lower percentage shall be substituted in the preceding sentence, provided that, in such case, such foreign investor has the power to direct the management and policies of such entity. Notwithstanding the foregoing and for purposes of clarity, none of **[*]** shall be deemed an Affiliate of Company.

1.8. "**Agreement**" has the meaning set forth in the preamble hereto.

1.9. "**Alliance Manager**" has the meaning set forth in Section 2.6(a).

1.10. "**Amended Cost Sharing Percentages**" has the meaning set forth in Section 3.3(d).

1.11. "**Annual Development and Research Plan Budget**" has the meaning set forth in Section 3.1(b).

1.12. "**Applicable Law**" means all applicable laws, statutes, rules, regulations, guidelines, orders, judgments and/or ordinances of any Governmental Authority that may be in effect from time to time.

1.13. "**Auditor**" has the meaning set forth in Section 8.9(b)(i).

1.14. "**BLA**" means a Biologics License Application for Regulatory Approval filed with the FDA in the United States pursuant to Section 351(a) of the Public Health Service Act (42 U.S.C. § 262(a) or any successor statutes or regulations), or any foreign equivalent thereof.

1.15. "**BPCIA**" has the meaning set forth in Section 9.6(c)(ii).

1.16. "**Breaching Party**" has the meaning set forth in Section 13.2(a).

1.17. "**Business Day**" means a day other than (a) a Saturday or a Sunday, (b) a bank or other public holiday in San Francisco, California, (c) a bank or other public holiday in Basel, Switzerland, or (d) with respect to administrative matters, but not the calculation and payment of amounts to be paid in connection with this Agreement, the nine (9) consecutive days beginning on December 24th and continuing through January 1st to the extent not already covered in (a), (b) or (c). Any measurement of a number of Business Days or days, as applicable, shall be determined with respect to Eastern Standard Time or Eastern Daylight Time, as applicable.

1.18. "**Calendar Quarter**" means the respective periods of three (3) consecutive calendar months ending on March 31, June 30, September 30 and December 31.

1.19. "**Calendar Year**" means a period of twelve (12) consecutive calendar months ending on December 31.

1.20. "**Change of Control**" means, with respect to a Party, any of the following events:

(a) any Third Party (or group of Third Parties acting in concert) becomes the beneficial owner, directly or indirectly, of more than fifty percent (50%) of the total voting power of the capital stock then outstanding of such Party normally entitled to vote in elections of directors other than pursuant to a consolidation or merger falling within (b) below; provided, however, that in no event, shall a sale of capital stock to underwriters of a public offering of the capital stock of Company constitute a Change of Control;

(b) such Party consolidates with or merges into another corporation or entity, or any corporation or entity consolidates with or merges into such Party, in either event pursuant to a transaction or series of related transactions following which more than fifty percent (50%) of the total voting power of the capital stock outstanding of the surviving entity, or its ultimate parent entity, normally entitled to vote in elections of directors is not held by Persons who held the outstanding shares of such Party immediately preceding such consolidation or merger, provided, however, that notwithstanding the foregoing, the occurrence of an event described in this clause (b) of this Section 1.20 with respect to a Party shall not be a Change of Control if either (X) a majority of the Board of Directors or other governing body of such Party or the surviving entity, or its ultimate parent entity, as applicable, after three (3) months following such event is comprised of members who were members of the Board of Directors or other governing body of such Party immediately prior to such event or (Y) a majority of the Executive Officers of

such Party or the surviving entity, or its ultimate parent entity, as applicable, after three (3) months following such event are individuals who were Executive Officers of such Party immediately prior to such event; or

(c) such Party conveys, transfers or leases all or substantially all of its assets related to this Agreement to any Third Party, whether resulting from merger, acquisition, consolidation or otherwise.

For purposes of this definition of "Change of Control" only, references to (a) "beneficial ownership" (and other correlative terms) means beneficial ownership as defined in Rule 13d-3 under the Exchange Act and (b) "group" means group as defined in the Exchange Act and the rules of the SEC thereunder as in effect on the date hereof. The Third Party or other corporation or entity which effects a Change of Control with respect to a Party shall be referred to as the "**Acquiring Party**".

1.21. "**Change of Control Notice**" has the meaning set forth in Section 14.1(a).

1.22. "**Claims**" has the meaning set forth in Section 11.1.

1.23. "**Clinical Study**" means a human clinical study conducted on human subjects that is designed to (a) establish that a pharmaceutical product is reasonably safe for continued testing, (b) investigate the safety and efficacy of the pharmaceutical product for its intended use, and to define warnings, precautions and adverse reactions that may be associated with the pharmaceutical product in the dosage range to be prescribed or (c) support Regulatory Approval, Pricing Approval or label expansion of such pharmaceutical product. Without limiting the foregoing, Clinical Study includes any Phase I Clinical Study, Phase II Clinical Study, Phase IIb Clinical Study, Phase III Clinical Study, or Phase IV Clinical Study.

1.24. "**CMC**" means chemistry, manufacturing and controls.

1.25. "**Code**" has the meaning set forth in Section 13.6(a).

1.26. "**Collaboration**" has the meaning set forth in Section 2.1.

1.27. "**Collaboration Molecule**" means an agonist of the molecular target known as Stimulator of Interferon Genes ("**STING**"), which agonist is owned or Controlled by either Party at the Effective Date or by either or both Parties during the Term, **[*].**

1.28. "**Collaboration Product**" means any pharmaceutical product or composition containing a Collaboration Molecule.

1.29. "**Combination Lead Party**" has the meaning set forth in Section 3.3(c).

1.30. "**Combination Regimen**" has the meaning set forth in Section 3.3(c).

1.31. "**Commencement Date**" has the meaning set forth in Section 3.3(d).

1.32. "**Commercial Sharing Percentage"** means, with respect to a given reference territory and a given Party:

(a) if such Party is Company, (i) fifty percent (50%) for the U.S., (ii) forty-five percent (45%) for European Profit Split Countries, and (iii) forty-five percent (45%) for Japan, including as potentially adjusted pursuant to Section 3.3(d); and

(b) if such Party is Novartis, (i) fifty percent (50%) for the U.S., (ii) fifty-five percent (55%) for European Profit Split Countries, and (iii) fifty-five percent (55%) for Japan, including as potentially adjusted pursuant to Section 3.3(d).

1.33. "**Commercialization**" means any and all processes and activities directed to market, promote, detail, distribute, import, export, offer to sell and/or sell a product and/or conduct other commercialization activities (including activities in preparation for the commercial launch of such product, or in retaining pricing, reimbursement and market access). "**Commercialize**" has a correlative meaning.

1.34. "**Commercialization Costs**" means the costs and expenses incurred by or on behalf of a Party or its Affiliates, **[*]**, which costs and expenses are consistent with the applicable Commercialization Plan, and in accordance with the expense recognition provisions of the Accounting Standards. **"Commercialization Costs"** shall include **[*]**. For the avoidance of doubt, contract or consultants deployed for detailing or marketing activities should be considered FTE costs.

1.35. "**Commercialization Costs Calculation Report**" has the meaning set forth in Section 5.4(c).

1.36. "**Commercialization Costs Report**" has the meaning set forth in Section 5.4(c).

1.37. "**Commercialization Plan**" has the meaning set forth in Section 5.2(c).

1.38. "**Commercially Reasonable Efforts**" means, with respect to any objective, those reasonable, diligent and good faith efforts to accomplish such objective as a Party would customarily use to accomplish a similar objective under similar circumstances, which are no less than those efforts used by such Party in its Development, Manufacture or Commercialization projects as the case may be with such Party's own compounds and products having comparable commercial potential, stage of development, medical/scientific, technical and regulatory profile, and intellectual property protection, taking into account all Commercially Relevant Factors at the time such efforts are to be expended. When taking into account profitability and other commercial considerations as a Commercially Relevant Factor, each Party shall not take into account that portion of profits to be shared with the other Party or royalty to be paid to the other Party, but will instead treat such payments as an amount that would be retained by such Party. To the extent that a Party's performance of its obligations hereunder is adversely affected by the other Party's failure to perform its obligations under this Agreement or any supply agreement (including the supply agreement referenced in Section 6.3), then the impact of such performance

failure will be taken into account in determining whether that Party has used its Commercially Reasonable Efforts to perform any such affected obligations, but only to the extent such other Party's performance failure is the cause of that Party's failure to meet such obligations.

1.39. "**Commercially Relevant Factors**" means, with respect to a Collaboration Product, including as applicable to such Collaborative Product, all relevant factors that may affect the Development, Regulatory Approval or Commercialization of such Collaboration Product, including (as applicable): safety, efficacy, quality or stability; product profile (including product modality, category and mechanism of action); stage of Development or life cycle status; Development, Regulatory Approval, manufacturing, and Commercialization costs and risk; feasibility of manufacture; the likelihood of obtaining Regulatory Approvals (including satisfactory price approvals) and the timing of such approvals; the current guidance and requirements for Regulatory Approval and the current and projected regulatory status; labeling or anticipated labeling; the then-current competitive environment external to the Parties and the likely competitive environment external to the Parties at the time of projected entry into the market (*i.e.*, not taking into consideration any other Collaboration Products or other products of the Parties); past performance; present and future market potential; existing or projected pricing, sales, reimbursement and profitability; pricing or reimbursement changes in relevant countries; proprietary position, strength and duration of patent protection and anticipated exclusivity; and other scientific, technical, regulatory, and commercial factors that the decision-making Party reasonably believes to be relevant to such Collaboration Product.

1.40. "**Company**" has the meaning set forth in the preamble to this Agreement.

1.41. "**Company Disclosure Schedule**" means the disclosure schedule prepared by Company and delivered by Company to Novartis on the Effective Date.

1.42. "**Company Indemnitees**" has the meaning set forth in Section 11.2.

1.43. "**Company Know-How**" means any Existing Company Know-How or Later Acquired Company Know-How that is reasonably necessary or useful, or that is actually used by either Party or their Affiliates, for the Development, Manufacture, use or Commercialization of Collaboration Molecules or Collaboration Products or to undertake research relating to STING agonists under this Agreement. "**Company Know-How**" shall include (a) such Know-How owned or Controlled by Company or any of its Affiliates as of the Effective Date ("**Existing Company Know-How**") and (b) such Know-How that first becomes owned or Controlled by Company or any of its Affiliates after the Effective Date that Company elects to designate as "**Later Acquired Company Know-How**". For the avoidance of doubt, "**Company Know-How**" excludes Joint Inventions, Joint Know-How and Novartis Know-How.

1.44. "**Company Patents**" means Existing Company Patents or Later Acquired Company Patents, having claims Covering any Collaboration Molecules or Collaboration Products, or having claims that are reasonably necessary or useful, or that are actually used by a Party or its Affiliates for the Development, Manufacture, use or Commercialization of any Collaboration Molecules or Collaboration Products. "**Company Patents**" shall include (a) such

Patent Rights owned or Controlled by Company or any of its Affiliates as of the Effective Date including any Patent Rights identified in Exhibit 1(A) attached hereto ("**Existing Company Patents**"), and (b) such Patent Rights that first become owned or Controlled by Company or any of its Affiliates after the Effective Date that Company elects to designate as "**Later Acquired Company Patents**". For the avoidance of doubt, "**Company Patents**" exclude Joint Patents and Novartis Patents.

1.45. "**Company Technology**" means Company Patents, Company Know-How, and Company's interest in Joint Know-How, Joint Patents and Joint Inventions.

1.46. "**Competing Product**" means a pharmaceutical product containing **[*]**, other than a Collaboration Product.

1.47. "**Confidential Information**" means, with respect to a Disclosing Party or any of its Affiliates, all Know-How and other proprietary or confidential information and data of a financial, commercial or technical nature which such Disclosing Party or any of its Affiliates has supplied or otherwise made available to the Recipient Party or its Affiliates, whether made available orally, in writing or in electronic form.

1.48. "**Continuing Party**" has the meaning set forth in Section 13.5(c).

1.49. "**Control**" or "**Controlled**" means, with respect to any Know-How, Patent Rights, other intellectual property rights, or any other proprietary or trade secret information, the legal authority or right (whether by ownership, license or otherwise other than pursuant to this Agreement) of a Party or any of its Affiliates (or, as described below, a Future Acquirer) to grant a license or a sublicense of or under such Know-How, Patent Rights, other intellectual property rights, or any other proprietary or trade secret information to another Person, or to otherwise disclose such proprietary or trade secret information to another Person to the extent set forth in this Agreement, without requiring the consent of a Third Party or breaching the terms of any agreement with a Third Party or misappropriating the proprietary or trade secret information of a Third Party. Notwithstanding the foregoing, any intellectual property right Controlled by a Future Acquirer of a Party shall not be treated as "Controlled" by a Party or its Affiliates for purposes of this Agreement to the extent, but only to the extent, that such intellectual property (a) is Controlled by such Future Acquirer of such Party immediately prior to the time such Future Acquirer qualifies as such, other than pursuant to a license or other grant of rights by such Party, or (b) is Controlled by such Future Acquirer subsequent to the time that such Future Acquirer qualifies as such but was not Controlled by such Party or its Affiliates immediately prior to the time such Future Acquirer qualifies as such and did not come under the Control of such Future Acquirer due to any reference or access to Company Technology or Novartis Technology, as applicable, by such Future Acquirer.

1.50. "**Controlling Party**" has the meaning set forth in Section 9.7(a).

1.51. "**Cost of Goods Sold**" or "**COGS**" means costs incurred by each Party in the actual Manufacturing of the Collaboration Product, established on a regular, standard basis in accordance with Accounting Standards as consistently applied by each Party, expressed on a per

unit basis. The Parties agree that COGS shall be determined pursuant to a full transparency and detailed cost calculation according to the principles of "open book" and agreed upon in advance by both Parties. COGS shall include the following elements:

(i) Costs of **[*]**;

(ii) Direct labor cost of production employees **[*]** of the Collaboration Product;

(iii) **[*]**;

(iv) The costs of equipment shall be based on **[*]**. Overhead shall be allocated to production proportionate to the usage of the manufacturing facility for actual manufacturing of Product using an appropriate allocation key such as space occupied or headcount. The costs of underutilization or idle capacity are not to be included in the COGS. Overheads shall not include **[*]**, by way of example only, **[*]**; and

(iv) Costs of approved third party sub-contract manufacturers. Such costs will include the actual amount paid taking into account the benefit of any price reductions, payment or terms discounts or other reimbursements, such as volume discounts, that may be applicable to such purchases.

1.52. "**Cover**", "**Covering**" or "**Covered**" means, with respect to a given product in a given country in the Territory, that, in the absence of ownership of or a license granted under a Valid Claim, the manufacture, use, offer for sale, sale or importation of such product in such country would infringe such Valid Claim (or, in the case of a claim that has not yet issued, would infringe such claim if it were to issue without modification).

1.53. "**Develop**" or "**Development**" means drug research and development activities, including compound discovery and characterization, test method development and stability testing, assay development and audit development, toxicology, formulation, process development, quality assurance/quality control development, statistical analysis, work on companion diagnostics, nonclinical studies, clinical studies, health technology assessments, packaging development, regulatory affairs, and the preparation, filing, prosecution and maintenance of any regulatory filings or regulatory approvals, including post-approval commitments.

1.54. "**Development and Research Plan**" has the meaning set forth in Section 3.1(a).

1.55. "**Development and Research Program**" means the Development activities for Early Research as well as Collaboration Molecules and Collaboration Products under the applicable Development and Research Plan, in each case in accordance with the terms of this Agreement.

1.56. "**Development Costs**" means all costs incurred by either Party in accordance with the Development and Research Budget after the Effective Date for the Research and

Development of the Collaboration Products pursuant to any Development and Research Plan, or Opt Out Development activities, as the context requires, comprising the sum of **[*]**, (b) **[*]** in connection with Development and (c) **[*]** that are deemed to constitute **[*]** under the terms of this Agreement.

1.57. "**Development Costs Calculation Report**" has the meaning set forth in Section 3.3(f).

1.58. "**Development Costs Report**" has the meaning set forth in Section 3.3(f).

1.59. "**Development Cost Sharing Percentage**" has the meaning set forth in Section 3.2.

1.60. "**Development Reimbursement Payment**" has the meaning set forth in Section 3.3(e).

1.61. "**Disclosed Inventions**" has the meaning set forth in Section 9.2.

1.62. "**Disclosing Party**" has the meaning set forth in Section 12.1(a).

1.63. "**Discontinuing Party**" has the meaning set forth in Section 13.5(c).

1.64. "**Dispute Resolution Officers**" means **[** * **]** or his/her designee.

1.65. "**DOJ**" means United States Department of Justice.

1.66. "**Draft Day**" has the meaning set forth in Section 3.3(a).

1.67. "**Early Research**" means Development activities up to initiation of GLP toxicology studies, whether research relating to STING agonists or relating to a particular Collaboration Molecule or potential Collaboration Product.

1.68. "**Effective Date**" means [*].

1.69. "**Election Notice**" has the meaning set forth in Section 3.3(d).

1.70. "**EMA**" means the European Medicines Agency or any successor entity thereto.

1.71. "**Encumbrance**" means any claim, charge, equitable interest, hypothecation, lien, mortgage, pledge, option, license, assignment, power of sale, retention of title, right of pre-emption, right of first refusal or security interest of any kind.

1.72. "**European Profit Split Countries**" means the Major European Countries, Greece, Switzerland and Russia.

1.73. "**Exchange Act**" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

1.74. "**Execution Date**" has the meaning set forth in the preamble hereto.

1.75. "**Executive Officer**" means with respect to a Party, any "officer" of such Party as such term is defined in Rule 16a-1 under the Exchange Act.

1.76. "**Existing Third Party License**" means an agreement entered into by Company with a Third Party (each, an "**Existing Third Party Licensor**") prior to the Effective Date, including any amendments thereto as of the Effective Date, pursuant to which such Third Party granted Company a license to Patent Rights or Know-How that are Controlled by Company or its Affiliates as of the Effective Date and that are necessary or useful to research, Develop, Manufacture, Commercialize, market, import, export, sell or offer for sale or otherwise use a Collaboration Product for any purpose in the Field. All Existing Third Party Licenses as of the Execution Date are listed on Exhibit 1(B).

1.77. "**FCPA**" has the meaning set forth in Section 5.8(a).

1.78. "**FD&C Act**" means the United States Federal Food, Drug, and Cosmetic Act, as amended.

1.79. "**FDA**" means the United States Food and Drug Administration or any successor entity thereto.

1.80. "**Field**" means oncology in humans, including immuno-oncology and cancer vaccines in humans.

1.81. "**First Commercial Sale**" means the first sale to a Third Party of an applicable Collaboration Product in a certain country after all Regulatory Approvals reasonably required for sale of and reimbursement for (if available) the Collaboration Product have been obtained in such country; provided that any sales of such applicable Collaboration Product arising from named patient, compassionate use, or other similar programs in the applicable country will not be considered a First Commercial Sale.

1.82. "**Fixed Royalty Territory**" means all countries throughout the Territory outside of the Profit Share Territories.

1.83. "**Force Majeure**" has the meaning set forth in Section 16.2.

1.84. "**FTE**" means a full-time dedicated, non-Executive Officer, non-administrative person year, or in the case of less than a full-time dedicated non-administrative person, a full-time equivalent non-administrative person year, based upon a total of **[*]** hours per year of Development, Manufacturing or Commercialization work undertaken by non-administrative personnel of Company or Novartis or their respective Affiliates, as applicable.

1.85. "**FTE Costs**" for a given period means the product of (a) the total FTEs (proportionately, on a per-FTE basis) dedicated by a Party or its Affiliates in the particular period to the direct performance of the activities allocated to such Party hereunder and (b) the FTE Rate.

1.86. "**FTE Rate**" means the rate per FTE (which may be prorated on a daily basis as necessary) of **[*]** per annum with respect to activities conducted pursuant to this Agreement. The FTE Rate shall be used only with respect to Development Costs and Trademark Costs and not any other costs, including Commercialization Costs, which shall have different FTE rates intended to approximate actual costs as reasonably agreed by the Parties. The FTE Rate is intended to cover the cost of salaries, benefits, infrastructure costs including informational technology costs, travel, general laboratory or office supplies, postage, insurance, training and all other general expenses and overhead items. The FTE Rate may be increased or reset with the mutual written consent of both Parties.

1.87. "**Future Acquirer**" means a Third Party to any Change of Control transaction involving a Party.

1.88. "**Global Branding Strategy**" has the meaning set forth in Section 5.3.

1.89. "**Governmental Authority**" means any court, agency, department, authority or other instrumentality of any multi-national, national, state, county, city, province or other political subdivision.

1.90. "**Gross Profits**" means in each Region within the Profit Share Territories (U.S., European Profit Split Countries, Japan), Net Sales in such Region less Cost of Goods Sold in such Region, for sales of Collaboration Product by any Party to Third Parties in such Region. **[*].**

1.91. "**[*]**" means [*].

1.92. "**IFRS**" means International Financial Reporting Standards, consistently applied.

1.93. "**IND**" means an Investigational New Drug application in the U.S. filed with the FDA or the corresponding application for the investigation of a Collaboration Product in any other country or group of countries, as defined in the Applicable Laws and filed with the Regulatory Authority of a given country or group of countries.

1.94. "**Indemnitee**" has the meaning set forth in Section 11.3.

1.95. "**Indemnitor**" has the meaning set forth in Section 11.3.

1.96. "**Insolvency Event**" means, in relation to either Party, any one of the following: (a) filing by such Party in any court or agency pursuant to any statute or regulation of any state or country, a petition in bankruptcy or insolvency or for reorganization or for an

arrangement or for the appointment of a receiver or trustee of the Bankrupt Party or of its assets; (b) a Person proposing a written agreement of composition or extension of a Bankrupt Party's debts; (c) such Party being served with an involuntary petition against the Bankrupt Party, filed in any insolvency proceeding, and such petition shall not be dismissed within sixty (60) days after the filing thereof; (d) such Party proposing or being a party to any dissolution or liquidation of such Party; or (e) such Party making a general assignment for the benefit of creditors.

1.97. "**Joint Commercialization Committee**" or "**JCC**" has the meaning set forth in Section 2.3(b)(i).

1.98. "**Joint Intellectual Property Committee**" or "**JIPC**" has the meaning set forth in Section 2.3(c)(i).

1.99. "**Joint Inventions**" has the meaning set forth in Section 9.3.

1.100. "**Joint Know-How**" has the meaning set forth in Section 9.3.

1.101. "**Joint Patents**" has the meaning set forth in Section 9.3.

1.102. "**Joint Research and Development Committee**" or "**JRDC**" has the meaning set forth in Section 2.3(a)(i).

1.103. "**Joint Steering Committee**" or "**JSC**" has the meaning set forth in Section 2.2(a).

1.104. "**Joint Supply Committee**" has the meaning set forth in Section 2.3(d).

1.105. "**Know-How**" means all technical information, know-how and data, including inventions (whether patentable or not), discoveries, trade secrets, specifications, instructions, processes, formulae, materials, expertise and other technology applicable to compounds, formulations, compositions, products or to their manufacture, development, registration, use or commercialization or methods of assaying or testing them or processes for their manufacture, formulations containing them, compositions incorporating or comprising them and including all biological, chemical, pharmacological, biochemical, toxicological, pharmaceutical, physical and analytical, safety, quality control, manufacturing, preclinical and clinical data, instructions, processes, formulae, expertise and information, regulatory filings and copies thereof, relevant to the development, manufacture, use or commercialization of and/or which may be useful in studying, testing, development, production or formulation of products, or intermediates for the synthesis thereof.

1.106. "**Later Acquired Company Know-How**" has the meaning set forth in Section 1.43.

1.107. "**Later Acquired Company Patents**" has the meaning set forth in Section 1.44.

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

1.108. "**Later Acquired Company Technology**" means Later Acquired Company Patents and Later Acquired Company Know-How.

1.109. "**Later Acquired Novartis Know-How**" has the meaning set forth in Section 1.134.

1.110. "**Later Acquired Novartis Patents**" has the meaning set forth in Section 1.135.

1.111. "**Later Acquired Novartis Technology**" means Later Acquired Novartis Patents and Later Acquired Novartis Know-How.

1.112. "**Lead Commercialization Party**" has the meaning set forth in Section 5.2.

1.113. "**Lead Regulatory Party**" has the meaning set forth in Section 4.2.

1.114. "**Losses**" has the meaning set forth in Section 11.1.

1.115. "**Major European Country**" means each of the United Kingdom, France, Germany, Italy and Spain.

1.116. "**Manufacture**" means, with respect to a Collaboration Molecule or Collaboration Product, to synthesize, express, manufacture, process, formulate, package, label, hold, store, quality control test and release such Collaboration Molecule or Collaboration Product, and "**Manufacturing**" means those activities that relate to the synthesis, expression, manufacture, processing, formulation, packaging, labeling, holding, storing, quality control testing and release of such Collaboration Molecule or Collaboration Product, including manufacturing process development and scale-up, validation, qualification and audit of clinical and commercial manufacturing facilities, bulk Collaboration Product and fill/finish work and related quality assurance technical support activities.

1.117. "**Marketing Authorization Application**" means an application for the authorization to market a Collaboration Product in any country or group of countries outside the United States, as defined in Applicable Law and filed with the Regulatory Authority of a given country or group of countries.

1.118. "**Marks**" has the meaning set forth in Section 9.9(b).

1.119. "**Material Receiving Party**" has the meaning set forth in Section 3.7(a).

1.120. "**Materials**" has the meaning set forth in Section 3.7(a).

1.121. "**Milestone**" has the meaning set forth in Section 8.2.

1.122. "**Milestone Payment**" has the meaning set forth in Section 8.2.

1.123. "**Mutual Consent Matter**" means those matters defined as a Mutual Consent Matter in Section 2.5(c)(iii) and any other matter that the Parties expressly mutually agree in this Agreement or otherwise in writing to designate as a "Mutual Consent Matter" under this Agreement. With respect to each Mutual Consent Matter, each Party must expressly provide its consent (including any such consent delivered by electronic transmission) given by a duly authorized representative of such Party.

1.124. "**NDA**" means, with respect to a Collaboration Product, a New Drug Application or BLA, as applicable, in the United States for authorization to market such Collaboration Product, as defined in Applicable Law and filed with the FDA, or the corresponding application in any other country or group of countries.

1.125. "**Net Sales**" means the net sales recorded by the Lead Commercialization Party or any of its Affiliates or sublicensees, excluding distributors and wholesalers, for any Collaboration Product sold to Third Parties other than sublicensees as determined in accordance with Accounting Standards as consistently applied, less a deduction of [*] for direct expenses related to the sales of the Collaboration Product, distribution and warehousing expenses and uncollectible amounts on previously sold products; provided, that no deductions for such items shall be made under clauses (i) through (viii) below. The deductions booked on an accrual basis by the Lead Commercialization Party and its Affiliates under its Accounting Standards to calculate the recorded net sales from gross sales include the following, in each case, to the extent actually accrued, discounted or credited, as applicable, and without duplication:

(i) customary trade and cash discounts;

(ii) amounts repaid or credited by reasons of defects, rejections or recalls or returns;

(iii) rebates and chargebacks to customers and third parties (including, without limitation, Medicare, Medicaid, Managed Healthcare and similar types of rebates);

(iv) any amounts recorded in gross revenue for goods provided to customers for free;

(v) amounts provided or credited to customers through coupons and other discount programs;

(vi) delayed ship order credits, discounts or payments related to the impact of price increases between purchase and shipping dates;

(vii) fee for service payments to customers for any non-separable services (including compensation for maintaining agreed inventory levels and providing information) to the extent required under the Lead Commercialization Party's Accounting Standards;

(viii) pharmaceutical excise taxes (such as those imposed by the United States Patient Protection and Affordable Care Act of 2010 (Pub. L. No. 111-48) and other comparable laws); and

(viii) other reductions for specifically identifiable amounts deducted for reasons substantially similar to those listed in clauses (i) through (viii) above if required under the Lead Commercialization Party's Accounting Standards.

With respect to the calculation of Net Sales:

(A) Net Sales only include the value charged or invoiced on the first arm's-length sale to a Third Party and sales between or among the Lead Commercialization Party and its Affiliates and sublicensees shall be disregarded for purposes of calculating Net Sales) provided, that neither the Lead Commercialization Party nor its Affiliates nor its sublicensees recognize revenue from any Third Party following or in connection with such sales, in which case such Third Party revenue shall be included in Net Sales; and

(B) If a Collaboration Product is delivered to the Third Party before being invoiced (or is not invoiced), Net Sales will be calculated at the time all the revenue recognition criteria under the Lead Commercialization Party's Accounting Standards are met.

1.126. "**New Third Party Licenses**" has the meaning set forth in Section 8.5(b)(i).

1.127. "**Non-Breaching Party**" has the meaning set forth in Section 13.2(a).

1.128. [*] means [*].

1.129. "**Nonclinical Studies**" means all non-human studies, including preclinical studies and toxicology studies, of Collaboration Products.

1.130. "**Novartis**" has the meaning set forth in the preamble to this Agreement.

1.131. "**Novartis Existing Fixed Royalty Territory Payments**" has the meaning set forth in Section 8.5(a).

1.132. "**Novartis New Fixed Royalty Territory Payments**" has the meaning set forth in Section 8.5(b)(i).

1.133. "**Novartis Indemnitees**" has the meaning set forth in Section 11.1.

1.134. "**Novartis Know-How**" means any Existing Novartis Know-How or Later Acquired Novartis Know-How that is reasonably necessary or useful, or that is actually used by either Party or their Affiliates, for the Development, Manufacture, use or Commercialization of Collaboration Molecules or Collaboration Products or to undertake research relating to STING agonists under this Agreement. "**Novartis Know-How**" shall include (a) such Know-How owned or Controlled by Novartis or any of its Affiliates as of the Effective Date ("**Existing**

Novartis Know-How") and (b) such Know-How that first becomes owned or Controlled by Novartis or any of its Affiliates after the Effective Date that Company elects to designate as "**Later Acquired Novartis Know-How**". For the avoidance of doubt, "**Novartis Know-How**" excludes Joint Inventions, Joint Know-How and Company Know-How.

1.135. "**Novartis Patents**" means Existing Novartis Patents and the Later Acquired Novartis Patents having claims Covering any Collaboration Molecules or Collaboration Products, or having claims that are reasonably necessary or useful, or that are actually used by a Party or its Affiliates for the Development, Manufacture, use or Commercialization of any Collaboration Molecules or Collaboration Products. "**Novartis Patents**" shall include (a) such Patent Rights owned or Controlled by Novartis or any of its Affiliates as of the Effective Date, including any Patent Rights identified in Exhibit 1(C) attached hereto, ("**Existing Novartis Patents**") and (b) such Patent Rights that first become owned or Controlled by the Novartis or any of its Affiliates after the Effective Date that Novartis elects to designate as "**Later Acquired Novartis Patents**". For the avoidance of doubt, "**Novartis Patents**" exclude Joint Patents and Company Patents.

1.136. "**Novartis Product Liability Claim**" means any Claim of product liability or damage to person or property or death resulting from the use or consumption of any Collaboration Product in the Fixed Royalty Territory.

1.137. "**Novartis Promotion Territory**" means with respect to each Collaboration Product, all countries in the Territory other than the U.S., provided, however, the U.S. shall become part of the Novartis Promotion Territory if the U.S. is included in the Fixed Royalty Territory pursuant to an election by Company under Section 3.3(d).

1.138. "**Novartis Technology**" means the Novartis Patents, Novartis Know-How, and Novartis' interest in Joint Know-How, Joint Patents and Joint Inventions.

1.139. "**Opt Out Development**" has the meaning set forth in Section 3.3(e).

1.140. "**Out-of-Pocket Costs**" means, with respect to activities pursuant to this Agreement, expenses paid or payable by either Party or its Affiliates to Third Parties (other than employees of such Party or its Affiliates) to the extent [*], have been recorded in accordance with the Accounting Standards, and for the avoidance of doubt, do not include [*].

1.141. "**Overall Development and Research Plan**" has the meaning set forth in Section 3.1(a).

1.142. "**Party**" or "**Parties**" has the meaning set forth in the preamble to this Agreement.

1.143. "**Patent Rights**" means the rights and interests in and to issued patents and pending patent applications in any country, jurisdiction or region (including inventor's certificates and utility models), including all provisionals, non-provisionals, substitutions, continuations, continuations-in-part, divisionals, renewals and all patents granted thereon, and all

reissues, reexaminations, extensions, confirmations, revalidations, registrations and patents of addition thereof, including supplementary protection certificates, PCTs, pediatric exclusivity periods and any foreign equivalents to any of the foregoing.

1.144. "**Payee**" has the meaning set forth in Section 8.6.

1.145. "**Payments**" has the meaning set forth in Section 8.6.

1.146. "**Payor**" has the meaning set forth in Section 8.6.

1.147. "**Person**" means any individual, partnership, limited liability company, firm, corporation, association, trust, unincorporated organization or other entity.

1.148. "**Phase I Clinical Study**" means a Clinical Study that generally provides for the introduction into humans of a pharmaceutical product with the primary purpose of determining safety, metabolism and pharmacokinetic properties and clinical pharmacology of such product, in a manner that is generally consistent with 21 C.F.R. § 312.21(a), as amended (or its successor regulation) and/or any analogous Applicable Law outside of the United States, as applicable, provided, however, a Phase I Clinical Study does not include any study generally characterized by the FDA as an "exploratory IND study" in CDER's Guidance for Industry, Investigators, and Reviewers Exploratory IND Studies, January 2006, irrespective of whether or not such study is actually performed in the United States or under an IND.

1.149. "**Phase II Clinical Study**" means a Clinical Study, the principal purpose of which is to make a preliminary determination as to whether a pharmaceutical product is safe for its intended use and to obtain sufficient information about such product's efficacy, in a manner that is generally consistent with 21 C.F.R. § 312.21(b), as amended (or its successor regulation) and/or any analogous Applicable Law outside of the United States, as applicable, to permit the design of further Clinical Studies.

1.150. "**Phase IIb Clinical Study**" means a phase IIb Clinical Study [*].

1.151. "**Phase III Clinical Study**" means a pivotal Clinical Study with a defined dose or a set of defined doses of a pharmaceutical product designed to ascertain efficacy and safety of such product, in a manner that is generally consistent with 21 C.F.R. § 312.21(c), as amended (or its successor regulation) and/or any analogous Applicable Law outside of the United States, as applicable. For clarity, a Pivotal Study is a Phase III Clinical Study.

1.152. "**Phase IV Clinical Study**" means a human clinical trial which is conducted on a product after Regulatory Approval of the product has been obtained from an appropriate Regulatory Authority, and includes (a) trials conducted voluntarily for enhancing marketing or scientific knowledge of an approved indication or (b) trials conducted after Regulatory Approval due to request or requirement of a Regulatory Authority or as a condition of a previously granted Regulatory Approval, including studies conducted in response to a pediatric written request or condition of approval studies.

1.153. "**PhRMA Code**" means the PhRMA Code on Interactions with Health Care Professionals.

1.154. "**Pivotal Study**" means a Phase III Clinical Study of a Collaboration Product or any other Clinical Study of such Collaboration Product which is intended to be sufficient to support Regulatory Approval of such Collaboration Product in a particular country, which may be either a Clinical Study conducted to support Regulatory Approval in one or more countries including such country or that is conducted specifically to support Regulatory Approval in such country.

1.155. "**Potential Combination Product**" has the meaning set forth in Section 3.3(c).

1.156. "**Pricing Approval**" means, with respect to any country or jurisdiction where a Governmental Authority authorizes reimbursement, or approves or determines pricing, for pharmaceutical products, receipt (or, if required to make such authorization, approval or determination effective, publication) of non-transitory reimbursement authorization or pricing approval or determination (as the case may be) together with any health technology assessments that may be required by or in such country or jurisdiction. For clarity, an authorization for reimbursement that may come into effect while a Regulatory Authority considers longer term or more permanent reimbursement or pricing shall be considered "non-transitory" if it lasts for greater than twelve (12) months.

1.157. "**Product Liability Claim**" means any Claim of product liability or damage to person or property or death resulting from the use or consumption of any Collaboration Product in the Territory.

1.158. "**Product Liability Share**" has the meaning set forth in Section 11.4(a).

1.159. "**Profit Share Territories**" means, subject to adjustment pursuant to Section 3.3(d), the following three (3) Regions within the Territory: (i) the U.S.; (ii) European Profit Split Countries; and (iii) Japan.

1.160. "**Publications**" has the meaning set forth in Section 12.4(c).

1.161. "**Purposes**" has the meaning set forth in Section 3.7(a).

1.162. "**Recipient Party**" has the meaning set forth in Section 12.1(a).

1.163. "**Region**" means (i) the U.S.; (ii) European Profit Split Countries; or (iii) Japan, as applicable.

1.164. "**Regulatory Approval**" means, with respect to a Collaboration Product in any country or jurisdiction, any approval (including Pricing Approvals), registration, license or authorization from a Regulatory Authority or other Governmental Authority in a country or other jurisdiction that is necessary to offer for sale, market and sell such Collaboration Product in such country or jurisdiction.

1.165. "**Regulatory Authority**" means, any Governmental Authority responsible for granting Regulatory Approvals for Collaboration Products, including the FDA, EMA and any corresponding national or regional regulatory authorities.

1.166. "**Regulatory Filing**" means, with respect to the Collaboration Products, any submission to a Regulatory Authority of any appropriate regulatory application, and shall include any submission to a regulatory advisory board, Marketing Authorization Application, and any supplement or amendment thereto. For the avoidance of doubt, "**Regulatory Filing**" includes any IND, NDA or the corresponding application in any other country or group of countries.

1.167. "**Royalty Term**" means on a Collaboration Product-by-Collaboration Product and country-by-country basis, the period starting on the Effective Date and ending on the later of (a) twelve (12) years after First Commercial Sale of such Collaboration Product in such country, (b) the date of expiration, lapse, or invalidation of the last Valid Claim (whether such Valid Claim is a Valid Claim under a Company Patent, Novartis Patent or Joint Patent.) Covering such Collaboration Product in such country, and (c) expiration of data exclusivity as conferred by a competent Regulatory Authority for such Collaboration Product in such country.

1.168. "**Sales & Profit Share Report**" means with respect to a Calendar Quarter, a written report showing each of: (a) the Gross Profits on sales of each Collaboration Product in each country in each Profit Share Territory during such Calendar Quarter and (b) the amounts payable by such Party under Section 8.4, in United States Dollars, which shall have accrued hereunder with respect to such Gross Profits, including the exchange rates used to calculate such amounts.

1.169. "**Sales & Royalty Report**" means with respect to a Calendar Quarter, a written report showing each of: (a) the Net Sales of each Collaboration Product in each country in the Fixed Royalty Territory during such Calendar Quarter; and (b) the royalties payable by Novartis under Section 8.3, in United States Dollars, which shall have accrued hereunder with respect to such Net Sales in the Fixed Royalty Territory, including the exchange rates used to calculate such royalties.

1.170. "**Sales Representatives**" means a pharmaceutical sales representative engaged by a Party or its Affiliates to conduct detailing and other sales or promotional efforts with respect to a Collaboration Product.

1.171. "**SEC**" means the U.S. Securities and Exchange Commission.

1.172. "**Second Request**" has the meaning set forth in Section 15.4.

1.173. "**Selected Molecules**" has the meaning set forth in Section 3.3(a).

1.174. "**Shared Existing Third Party Payments**" has the meaning set forth in Section 8.5(a).

1.175. "**Shared Product Liability Claim**" means any Claim of product liability or damage to person or property or death resulting from the use or consumption of any Collaboration Product in the Profit Share Territories.

1.176. "**STING**" has the meaning set forth in Section 1.27.

1.177. "**Subcommittee**" has the meaning set forth in Section 2.3.

1.178. "**Sunshine Act**" has the meaning set forth in Section 5.8(a).

1.179. "**Term**" has the meaning set forth in Section 13.1.

1.180. "**Territory**" means all countries of the world.

1.181. "**Third Party**" means any Person other than a Party or an Affiliate of a Party.

1.182. "**Trademark Costs**" mean the FTE costs and Out-of-Pocket Costs including filing and maintenance expenses, in each case incurred in connection with the establishment and maintenance of rights under trademarks applicable to Collaboration Products in the Territory, including costs of Territory trademark filing and registration fees, actions to enforce or maintain a Territory trademark and other Territory trademark proceedings.

1.183. "**Transfer Record**" has the meaning set forth in Section 3.7(a).

1.184. "**Transferring Party**" has the meaning set forth in Section 3.7(a).

1.185. "**UK Bribery Act**" has the meaning set forth in Section 5.8(a).

1.186. "**U.S.**" or "**US**" means the United States of America and its territories and possessions.

1.187. "**U.S. GAAP**" means U.S. generally accepted accounting principles, consistently applied.

1.188. "**Valid Claim**" means, with respect to a particular country in the Territory, (a) a claim of an issued and unexpired patent in such country Covering the applicable product in each case that has not been revoked or held unenforceable, unpatentable or invalid by a decision of a court or other governmental agency of competent jurisdiction that is not appealable or has not been appealed within the time allowed for appeal, and that has not been abandoned, disclaimed, denied or admitted to be invalid or unenforceable through reissue, re-examination or disclaimer or otherwise, and (b) a claim of a patent application in such country Covering the applicable product, in each case that has been pending less than **[*]** from the earliest date on which such patent application claims priority and which claim was filed and is being prosecuted in good faith and has not been cancelled, withdrawn or abandoned or finally rejected by an

administrative agency action from which no appeal can be taken. Where the product referred to in this definition is a Collaboration Product, the term "patent" in clause (a) of this definition shall mean a Company Patent, Novartis Patent or Joint Patent and the phrase "a claim of a patent application" in clause (b) of this definition shall mean a claim of a patent application included in a Company Patent, Novartis Patent or Joint Patent.

Article 2
Collaboration; Governance

2.1 Collaboration Overview. The Parties desire and intend to collaborate with respect to the Development and Commercialization of Collaboration Products in the Field in the Territory, as and to the extent set forth in this Agreement (the "Collaboration"). In connection with its participation in the Collaboration, each Party shall endeavor in good faith to maximize the economic value of the Collaboration Products to the Parties.

2.2 Joint Steering Committee.

(**a) Establishment**. Within [*] days after the Effective Date, the Parties shall establish for the Term a joint steering committee ("Joint Steering Committee" or "JSC") that will have the responsibility for the overall coordination and oversight of the Parties' activities under the Collaboration and this Agreement. Each Party shall have the right to appoint three (3) representatives to the JSC. As soon as practicable following the Effective Date (but in no event more than [*] days following the Effective Date), each Party shall have the right to designate its initial representatives to the JSC. Each Party shall be free to change its JSC representatives on notice to the other Party or to send a substitute representative to any JSC meeting; provided, however, that each Party shall ensure that at all times during the existence of the JSC, its representatives on the JSC have the appropriate expertise and seniority (including at least one (1) member of senior management) for the then-current stage of Development and Commercialization of the Collaboration Products and have sufficient authority to act on behalf of such Party with respect to matters within the purview of the JSC. Each Party's JSC representatives and any substitute for a JSC representative shall be bound by the obligations of confidentiality set forth in Article 12.

(b) Specific Responsibilities of the JSC. In addition to its overall responsibility for monitoring and providing general oversight with respect to the Parties' activities under the Collaboration, the JSC shall in particular have the following responsibilities:

(i) periodic review of the overall goals, strategy and progress of each Development and Research Program and adjusting such goals and strategy of each Development and Research Program as needed;

(ii) with respect to each Collaboration Product, reviewing and approving the Development and Research Plan and making any revisions, updates or amendments to the Development and Research Plan, the Annual Development and Research Plan Budget for such Collaboration Product;

(iii) reviewing and approving the Commercialization Plan and its related budget in the Profit Share Territories;

(iv) with respect to each Collaboration Product, reviewing and approving any new Development for such Collaboration Product;

(v) periodic review of the overall goals, strategy and progress of the Commercialization of the Collaboration Products;

(vi) reviewing and approving the Global Branding Strategy for each Collaboration Product prepared by the JCC;

(vii) reviewing and approving New Third Party Licenses pursuant to Section 8.5(b);

(viii) coordinating the reporting of actual financial results for the Collaboration Products so as to ensure that each Party can timely comply with all of its reporting obligations;

(ix) resolution of matters presented to it by, and disputes raised to it by the Joint Research and Development Committee, the Joint Commercialization Committee, the Joint Intellectual Property Committee, the Joint Supply Committee or any other Subcommittee, in each case, that is within the scope of responsibilities delegated to the respective Subcommittee by the JSC under this Agreement and subject to final decision-making authority set forth in Section 2.5; and

(x) performing such other functions as appropriate, and directing each Subcommittee to perform such other functions as appropriate, to further the purposes of this Agreement and the Collaboration, in each case as mutually agreed in writing by the Parties.

2.3 Subcommittees. The JSC may establish and disband such subcommittees as deemed necessary by the JSC to perform activities and functions delegated to the JSC hereunder (each a "**Subcommittee**"). Each such Subcommittee shall consist of the same number of representatives designated by each Party, which number, if not provided for in this Agreement, shall be mutually agreed by the Parties. Each Party shall be free to change its Subcommittee representatives on notice to the other Party or to send a substitute representative to any Subcommittee meeting; provided, however, that each Party shall ensure that at all times during the existence of any Subcommittee, its representatives on such Subcommittee have the appropriate expertise and seniority for the then-current stage of Development and Commercialization of the applicable Collaboration Product(s) and have sufficient authority to act on behalf of such Party with respect to matters within the purview of the relevant Subcommittee. Each Party's Subcommittee representatives and any substitute for such representatives shall be bound by the obligations of confidentiality set forth in Article 12. The initial Subcommittees of the JSC will be the Joint Research and Development Committee and the Joint Intellectual Property Committee.

(a) Joint Research and Development Committee.

(i) Establishment. Within **[*]** days after the establishment of the JSC, the JSC shall establish a single joint research and development committee (each a "**Joint Research and Development Committee**" or "**JRDC**") that shall be responsible for the overall coordination and oversight of Early Research as well as each Development and Research Program. Each Party shall be entitled to appoint two (2) representatives to the JRDC. As soon as practicable following the Effective Date (but in no event more than **[*]** days following the Effective Date), each Party shall designate its initial representatives to the JRDC.

(ii) Specific Responsibilities of the JRDC. With respect to the applicable Development and Research program, the JRDC shall have the following responsibilities subject to oversight of the JSC and in accordance with Section 2.5:

(A) discussing, preparing and recommending to the JSC for review and approval the Development and Research Plan and any revisions, updates or amendments to the Development and Research Plan and the Annual Development and Research Plan Budget for such Development and Research Program;

(B) discussing, preparing and recommending to the JSC for review and approval any new Development;

(C) overseeing, coordinating and implementing such Development and Research Program;

(D) providing a forum for the Parties to discuss such Development and Research Program;

(E) providing a forum for the Parties to discuss the appropriate allocation of costs and expenses under this Agreement for such Development and Research Program;

(F) reporting to the JSC on financial matters;

(G) monitoring the spending of the Parties under each Development and Research Plan; and

(H) performing such other functions as may be appropriate to further the purposes of the Collaboration and this Agreement, in each case with respect to such Development and Research Program, as mutually agreed in writing by the Parties and directed by the JSC.

(b) Joint Commercialization Committee.

(i) Establishment. At the appropriate time to be decided by the JSC, the JSC shall establish a joint commercialization committee (the "**Joint**

Commercialization Committee" or "**JCC**") that shall be responsible for overseeing, reviewing and coordinating the Commercialization of the Collaboration Products in the Territory. Each Party shall have the right to appoint two (2) representatives to the JCC. For the avoidance of doubt, and notwithstanding any other provision of this Agreement, the JCC shall have no decision-making responsibility with respect to Commercialization of Collaboration Products.

(ii) Specific Responsibilities of the JCC. The JCC shall have the following responsibilities subject to oversight of the JSC and in accordance with Section 2.5:

(A) reviewing and commenting on each Commercialization Plan submitted to the JCC in accordance with Section 5.2(c), including the budget contained therein;

(B) preparing and recommending to the JSC for review and approval of the Commercialization Plan and related budget for the Profit Share Territories;

(C) setting FTE rates for Commercialization activities undertaken by non-administrative personnel of Company or Novartis or their respective Affiliates;

(D) providing a forum for the Parties to discuss the Commercialization of Collaboration Products; and

(E) performing such other functions as may be appropriate to further the purposes of the Collaboration and this Agreement, in each case with respect to the Commercialization of the Collaboration Products, as mutually agreed in writing by the Parties and directed by the JSC.

(c) Joint Intellectual Property Committee.

(i) Establishment. Within [*] days after the establishment of the JSC, the JSC shall establish a joint intellectual property committee (the "**Joint Intellectual Property Committee**" or "**JIPC**") that shall be responsible for overseeing, reviewing and coordinating matters related to Company Technology and Novartis Technology pursuant to Article 9. Each Party shall have the right to appoint two (2) representatives to the JIPC, each of which shall have appropriate experience and expertise with intellectual property matters relating to pharmaceutical products and technologies.

(ii) Specific Responsibilities of the JIPC. The JIPC shall have the following responsibilities subject to oversight of the JSC and in accordance with Section 2.5:

(A) with respect to Joint Inventions, on an application by-application basis, determining what claims will be prosecuted and what claims or applications will be abandoned;

(B) conducting periodic portfolio reviews to propose strategies to maximize the strength of the patent portfolio and cost effectiveness of the preparation, filing, prosecution and maintenance of Company Patents and Novartis Patents, as they relate to the Development, Manufacture or Commercialization of Collaboration Products;

(C) coordinating decision-making between the Parties on matters of mutual concern as set forth in Article 9; and

(D) performing such other functions as may be appropriate to further the purposes of the Collaboration and this Agreement, in each case with respect to the intellectual property matters arising hereunder, as mutually agreed in writing by the Parties and directed by the JSC.

(d) Joint Supply Committee. Prior to initiation of a Phase II Clinical Study for the first Collaboration Product, the JSC shall establish a joint supply committee (the "**Joint Supply Committee**") that shall be responsible for overseeing, reviewing and coordinating the Manufacture and supply of the Collaboration Products in [*] in a manner to be consistent with, and as further provided in, a commercial supply agreement entered into pursuant to Section 6.3.

2.4 Administration of Committees.

(a) Chairperson.

(i) Each of the JSC and the Subcommittees shall have one (1) chairperson, with Company and Novartis alternating the right to appoint such chairperson to the JSC or such Subcommittee, as applicable, on an annual basis, with Company having the initial right to such chairperson appointments.

(ii) The chairperson shall not have any greater authority than any other representative on the JSC or such Subcommittee, as applicable. The chairperson shall have the right to call a meeting of the JSC or respective Subcommittee, as applicable, and shall have the following responsibilities: (A) preparing and issuing minutes of each such meeting within **[*]** days thereafter; (B) ensuring that any decision-making delegated to the JSC or such Subcommittee, as applicable, is carried out in accordance with Section 2.5; and (C) preparing and circulating an agenda for any upcoming meeting of the JSC or respective Subcommittee, as applicable.

(b) Meetings. The JSC and each Subcommittee shall each hold at least one (1) meeting per Calendar Quarter at such times during such Calendar Quarter as the JSC or applicable Subcommittee chairperson elects to do so. Meetings of the JSC and the Subcommittees, respectively, shall be effective only if at least two (2) representatives of each Party are present. The JSC and its Subcommittees may meet either (i) in person at such varied locations as the JSC or applicable Subcommittee mutually agree or (ii) by audio or video teleconference; provided that no less than two (2) meetings of the JSC during each Calendar Year shall be conducted in person. Other representatives of each Party involved with the Collaboration Products may attend JSC and Subcommittee meetings as non-voting participants,

provided that such representatives are subject to the confidentiality provisions set forth in Article 12. Additional meetings of the JSC and its Subcommittees may also be held with the consent of each Party, or as required under this Agreement. The meetings of two (2) or more Subcommittees may be combined in the same session, provided that the required members of such Subcommittees, as provided in this Section 2.4(b), are in attendance. Each Party shall be responsible for all of its own expenses incurred in connection with participating in all such meetings.

(c) Appointment as a Right. The appointment of members of the JSC and any Subcommittee of the JSC is a right of each Party and not an obligation and shall not be a "deliverable" as referenced in any existing authoritative accounting literature. Each Party shall be free to determine not to appoint members to the JSC or any Subcommittee of the JSC. The failure of a Party to appoint members of the JSC or any Subcommittee thereof shall not constitute a breach of this Agreement, and unless and until such members are appointed, the Party that has made the requisite appointments may unilaterally discharge the roles of the JSC or any Subcommittee thereof for which members were not appointed; provided that neither Party shall unilaterally discharge the roles of the JSC or any Subcommittee thereof as permitted under this Section 2.4(c) unless the other Party has not appointed any members within **[*]** days after the first Party has completed its appointment of its members.

2.5 Decision-Making.

(**a) Within JSC and Subcommittees**. Actions to be taken by the JSC and each of the Subcommittees shall be taken only following a unanimous vote, with the representatives of each Party collectively having one (1) vote. If any Subcommittee fails to reach unanimous agreement on a matter before it for a period in excess of [*], the matter shall be referred to the JSC for resolution.

(b) Referral to Dispute Resolution Officers. If the JSC cannot resolve a matter specifically delegated to it or a dispute referred to it by a Subcommittee on a matter specifically delegated to such Subcommittee within [*] after it begins discussing any such delegated matter or the applicable Subcommittee's referral of such dispute, as applicable, then the JSC shall escalate such matter or dispute to the Dispute Resolution Officers for resolution. Such Dispute Resolution Officers shall use good faith efforts to resolve promptly such matter or dispute, which good faith efforts shall include at least one (1) in-person meeting between such Dispute Resolution Officers if such matter or dispute has not been resolved within [*] after the JSC's submission of such matter or dispute to such Dispute Resolution Officers. If the Dispute Resolution Officers are unable to mutually agree on the resolution of such matter or dispute within [*] after the JSC's submission of such matter or dispute to them (including during the in-person meeting described in the immediately preceding sentence), then the matter shall be resolved in accordance with Section 2.5(c).

(c) Final Decision-Making Authority. If the Dispute Resolution Officers are unable to mutually agree within [*] on the resolution of a matter submitted to them pursuant to Section 2.5(b), then Company and Novartis shall have final decision-making authority on disputes related to the matters respectively set forth below:

(i) [*] shall have final decision-making authority on disputes as to:

(A) [*]; and

(B) [*].

(ii) [*] shall have final decision-making authority on disputes as to all matters relating to [*].

(A) Notwithstanding anything to the contrary herein, **[*]**

Each Party may seek any right or remedy available to it with respect to any matter not finally resolved pursuant to the foregoing.

2.6 Alliance Managers.

(a) Appointment. Within [*] days following the Effective Date each Party will appoint (and notify the other Party of the identity of) a senior representative of such Party having a general understanding of pharmaceutical Development and Commercialization issues to act as its alliance manager under this Agreement (each an "**Alliance Manager**"). Each Party may replace its Alliance Manager at any time by written notice to the other Party.

(b) Specific Responsibilities. The Alliance Managers will serve as the primary contact point between the Parties for the Collaboration for the purpose of providing each Party with information on the progress of Development and Commercialization of each Collaboration Product and shall have the following responsibilities:

(i) facilitating the flow of information and otherwise promoting communication, coordination and collaboration between the Parties;

(ii) coordinating the various functional representatives of each Party, as appropriate, in developing and executing strategies and plans for the applicable Collaboration Product;

(iii) providing a single point of communication for seeking consensus both internally within the respective Party's organization and between the Parties regarding key strategy and planning issues;

(iv) assisting the integration of teams across functional areas;

(v) assisting Subcommittees in identifying and raising cross-Party and/or cross-functional disputes in a timely manner; and

(vi) performing such other functions as directed by the JSC.

2.7 General Authority; Conduct of Parties. Each of the JSC, the Subcommittees and the Alliance Managers shall have solely the powers expressly assigned to them in this Article 2 and elsewhere in this Agreement. Neither the JSC nor any Subcommittee or Alliance Manager shall have any power to amend, modify, or waive compliance with this Agreement. In conducting themselves on the JSC and the Subcommittees, and as Alliance Managers, and in exercising their rights under this Article 2, all representatives of both Parties shall consider diligently, reasonably and in good faith all input received from the other Party, and shall use reasonable efforts to reach unanimity, where required, on all matters before them.

2.8 Operational Separation. If an "operational separation" is elected pursuant to Section 14.1 under the circumstances provided for therein, the responsibilities of the JSC and the JRDC with respect to a Collaboration Molecule or Collaboration Product shall be limited to activities **[*]** with respect to such Collaboration Molecule or Collaboration Product; provided, however, that the JSC and the JRDC will still have responsibility for approving the Annual Development and Research Plan Budget. For the avoidance of doubt, an "operational separation" shall be with respect to the Collaboration as a whole, and not on a Collaboration Product-by-Collaboration Product or a Collaboration Molecule-by-Collaboration Molecule basis. Notwithstanding any "operational separation," each Party may continue to perform Nonclinical Studies and other preclinical research with respect to any Collaboration Molecule or Collaboration Product but without coordination through the JSC or the JRDC.

Article 3
Development

3.1 Joint Development.

(a) General. The Parties intend and agree to collaborate with one another with respect to the Development of Collaboration Products in the Field as provided in this Article 3 under the direction of the JRDC and pursuant to the respective Development and Research Program throughout the Territory. In conducting Development activities as provided hereunder, including in prosecuting Regulatory Approvals, each Party shall endeavor in good faith to maximize the economic value of the Collaboration Products to the Parties. The Parties' respective responsibilities with respect to each Collaboration Product and to Early Research will be set forth in a detailed written development and research plan that is agreed to by the Parties (each, a "**Development and Research Plan**"). Further, within **[*]** days following the Effective Date the Parties shall develop and mutually agree upon an overarching plan for the research and Development activities they contemplated to undertaken under the Agreement, including the discovery, research and Development of Collaboration Products as well as research involving Company Technology in the Field during at least the **[*]** year period following the Effective Date ("**Overall Development and Research Plan**"). During the Term so long as the Fixed Royalty Territory does not encompass the entire Territory: (i) the Parties shall periodically update, extend and renew such Overall Development and Research Plan during the Term; (ii) consistent with the Overall Development and Research Plan and Section 3.1(d), the applicable Party(ies) shall provide to the JRDC (for review by the JRDC and approval by the JSC in accordance with Article 2) a Development and Research Plan for each Collaboration Product;

(iii) the Development and Research Plan for each Collaboration Product shall be updated from time to time, upon review by the JRDC and approval by the JSC in accordance with Article 2; (iv) each Development and Research Plan and any updates thereto shall (A) reflect the application of Commercially Reasonable Efforts to Develop the applicable Collaboration Product, (B) specify in reasonable detail all material Development activities to (1) generate the preclinical, clinical, CMC, regulatory and other information required for filing Regulatory Approval applications for such Collaboration Product and (2) achieve Regulatory Approval for such Collaboration Product in the Territory and (C) include those obligations assigned to each Party with respect to the performance of the Development activities contemplated by such Development and Research Plan; provided, however, that neither the Development and Research Plan nor the Overall Development and Research Plan shall assign any obligations to a Party without the prior written consent of such Party, and such prior written consent (or lack thereof) may not be overruled by any final decision-making authority of a Party herein; and (v) in the event of any inconsistency between any Development and Research Plan and this Agreement, the terms of this Agreement shall prevail. If the Development and Research Plan for a Collaboration Product contemplates that the Collaboration Product is to be Developed in multiple indications, then the Parties will agree in good faith which Party will be responsible for the day-to-day decision-making for each such indication, subject to the final decision-making authority of the Parties set forth in Section 2.5(c). In the event **[*]**, then **[*]**.

(b) JSC to Approve Annual Development and Research Plan Budgets. The JRDC shall be responsible for preparing and submitting to the JSC for approval by the JSC a detailed budget relating to the activities set forth in the applicable Development and Research Plan for each Calendar Year (broken down by Calendar Quarters) covered by the applicable Development and Research Plan (as such budget may be amended from time to time, an "**Annual Development and Research Plan Budget**"). Each Party shall use Commercially Reasonable Efforts to manage the Development activities allocated to such Party in the applicable Development and Research Plan such that the Development Costs associated with such Development activities do not exceed the applicable budgeted amounts for such activities in the applicable Annual Development and Research Plan Budget.

(c) Amendments to Development and Research Plans and Annual Development and Research Plan Budgets. From time to time as the JRDC shall deem appropriate, the JRDC shall prepare amendments to the then-current Development and Research Plan for the applicable Collaboration Product for approval by JSC. Each such amended Development and Research Plan shall reflect any changes, re-prioritization of studies within, reallocation of resources with respect to, or additions to the then-current Development and Research Plan for such Collaboration Product. In addition, the JRDC shall prepare annual updates to the Annual Development and Research Plan Budget for such Collaboration Product (without necessarily having to amend the corresponding Development and Research Plan) no later than September 1st of each Calendar Year in order to reflect changes in such budget for the following Calendar Year and recommend such amendment for approval by the JSC. Each such amended Annual Development and Research Plan Budget shall specify with reasonable detail the budget for the items described in the applicable Development and Research Plan. Once approved by the JSC, each amended Development and Research Plan and/or Annual

Development and Research Plan Budget shall become effective for the applicable period on the date approved by the JSC (or such other date as the JSC shall specify). Any JSC-approved amended Development and Research Plan and/or Annual Development and Research Plan Budget shall supersede the previous Development and Research Plan and/or Annual Development and Research Plan Budget for the applicable period.

(d) Development Proposals. If either Party desires to undertake Development in the Territory for a Collaboration Product and/or research involving Company Technology in the Field, then such Party, as applicable, may propose such Development activities by submitting to the other Party and the JRDC a written summary of, and proposed protocol for, such Development activities. The JRDC shall consider in good faith, take into account and implement where possible the reasonable comments made by the other Party with respect to such Development activities and the Parties, through the decision-making processes (including final decision-making) set forth in Article 2, and shall decide whether and how to undertake such Development activities. To the extent any such, or other alternative, Development activities are duly approved to be undertaken, then the JRDC shall prepare amendments to the applicable Development and Research Plan and Annual Development and Research Plan Budget for approval by the JSC. Upon JSC approval, each Party shall undertake such approved Development. The Parties shall report on the progress of such Development at each meeting of the JRDC.

3.2 Responsibility for Development Costs. Subject to adjustment pursuant to Section 3.3(d), the Parties shall share any and all Development Costs throughout the Territory with Novartis being responsible for sixty-two percent (62%) of all Development Costs and Company being responsible for thirty-eight percent (38%) of all Development Costs for each Collaboration Molecule, each Collaboration Product and all Early Research (collectively, such percentages for sharing Development Costs, the "**Development Cost Sharing Percentages**"). The calculation of the Development Cost Sharing Percentages is set forth in Exhibit 3.3(d).

3.3 Collaboration Product and Company Elections.

(a) Collaboration Product Election. **Promptly following [*]**, the Parties shall schedule a special meeting of the JRDC (the date of such meeting, **"**Draft Day"). During the JRDC meeting on Draft Day, the Parties shall collaboratively select and designate an additional [*] Collaboration Molecules to be retained as candidates to become Collaboration Products under this Agreement, with respect to which neither Party nor any of their Affiliates shall undertake any activities outside of the Field. Following the designation of such Collaboration Molecule to be retained as candidates to become Collaboration Products under this Agreement, during the JRDC meeting on Draft Day the Parties shall alternate turns in selecting other Collaboration Molecules for their own Development outside the Field, with each Party selecting one such Collaboration Molecule and then allowing the other Party to select one such Collaboration Molecule, alternating turns until each Party has selected a total of up to **[*]** such Collaboration Molecules for their respective Development outside the Field (i.e., a total of **[*]** such Collaboration Molecules for Development outside the Field by the Parties); provided, however, that (i) Novartis may not select a Collaboration Molecule that falls within or is covered

by Company Patents or Company Know-How and (ii) Company may not select a Collaboration Molecule that falls within or is covered by the Novartis Patents or Novartis Know-How. In such selection of Collaboration Molecules, Company shall go first in beginning the alternating rounds of selection, and in the event a Party declines to choose or is unable to choose any additional Collaboration Molecules before it has selected [*] Collaboration Molecules, then the other Party may continue to select up [*] Collaboration Molecules. From and after Draft Day, each Party and its Affiliates shall be permitted to Develop and Commercialize the [*] (or such lesser number as selected by such Party) such Collaboration Molecules it selected for its Development outside the Field, and may do so without further obligation or reporting to the other Party. The Collaboration Molecules selected for Development outside the Field by the Parties shall collectively be referred to as the "**Selected Molecules**" hereunder and the Selected Molecules shall no longer be considered "Collaboration Molecules" for all purposes hereunder. For the avoidance of doubt, nothing in this Section 3.3(a) shall prevent either Party from **[*]**.

(b) Antagonists. It is acknowledged that Company has a pre-existing STING Antagonist development program. Neither Party is granting hereunder rights to any STING antagonists, including as part of the Patent Rights or Know-How licensed by a Party hereunder. Nevertheless, (i) the Parties may Develop STING antagonists in the course of activities under this Agreement, which STING antagonists shall be part of the Collaboration, provided that they are not Covered by a Party's Patent Rights or included within a Party's Know-How, in each case, that is not part of the Collaboration and (ii) either Party may choose, in its sole discretion, to grant to the Collaboration rights to Develop, Commercialize and otherwise exploit a STING antagonist under this Agreement on terms to be agreed in good faith by the Parties. For clarity, a Party shall be free to Develop, Commercialize and otherwise exploit on its own or with Third Parties with any means and for any purpose, without any obligation or reporting to the other Party, any antagonist that is not part of the Collaboration.

(c) Combination Regimens. In the event the JRDC expresses an interest in Developing a product owned or controlled by a Party (the "**Combination Lead Party**" and such product, the "**Potential Combination Product**") identified by either Party for labeling in combination with a Collaboration Product (a "**Combination Regimen**") and the Combination Lead Party agrees to Develop the Combination Regimen as part of the Collaboration: **[*]**. Each Party shall periodically review its other product assets for product opportunities that may be appropriate for use in combination with a Collaboration Product, as would be reflected in a targeted labelled indication.

(d) Company Election. On a Collaboration Product-by-Collaboration Product basis, with respect to any individual Region, any combination of two (2) Regions or all three (3) of the Regions, of the Profit Share Territory, Company may make a one-time election to either: (1) reduce by fifty percent (50%) Company's Development Cost Sharing Percentage for all Development activities (other than Early Research) and its Commercial Sharing Percentage for a Collaboration Product (e.g., a reduction to 25% for U.S. or 22.5% in Profit Share Territory outside the U.S.), or (2) reduce to zero Company's Development Cost Sharing Percentage for all Development activities (other than Early Research) and its Commercial Sharing Percentage for a Collaboration Product (the "**Amended Cost Sharing Percentages**"). In order to permit

Company to exercise such election, the JSC shall deliver to Company a written notice that sets forth the anticipated commencement date (the "**Commencement Date**") of **[*]** at least **[*]** prior to the Commencement Date (the "**Election Notice**"). Company may elect to reduce or eliminate its sharing of Development Costs as contemplated by this Section 3.3(d) by delivering to the JSC written notice of such election prior to the date that is the later of **[*]** months after delivery of the Election Notice or **[*]** year prior to the Commencement Date. If Company makes any such election with respect to one or more such Regions and Collaboration Product:

(i) the Parties shall promptly re-calculate and adjust the Development Cost Sharing Percentages applicable to Development Costs for Development activities (other than Early Research) for such Collaboration Product in accordance with Exhibit 3.3(d) taking into consideration such election, which Amended Cost Sharing Percentages shall apply with respect to all past and any future Development Costs for such Collaboration Product from and after January 1st of the first calendar year following such election (but shall not apply to any other Collaboration Product, which shall remain unaffected by such election);

(ii) from and after **[*]** following such election Company shall be credited with the difference of Development Cost sharing amount due to the change in the Development Cost Sharing Percentages (e.g., if the total development cost shared for such Collaboration Product is US$100 Million, and Company has paid US$38 Million since the Effective Date for such Collaboration Product based on its Development Cost Sharing Percentage of 38%, and if the applicable Amended Cost Sharing Percentage is 19%, then the credit would be US$19 Million or US$100 Million * (38%—19%)), and (A) if there remains any Region(s) within the Profit Share Territory for such Collaboration Product, such credit shall be applied to future payments due for Development Costs to be shared in such Region(s), but (B) if there are no remaining Regions within the Profit Share Territory for such Collaboration Product (i.e., the Fixed Royalty Territory for such Collaboration Product is now worldwide), then the amount of such credit shall instead be paid to Company by Novartis (and fully satisfied through such payment) due and payable **[*]**;

(iii) from and after **[*]** following such election and continuing throughout the remainder of the Term, the Commercial Sharing Percentage shall be adjusted by reducing it by half or to zero in the specific Region, as applicable, for such Collaboration Product (provided any such reduction or elimination shall not apply to any other Collaboration Product, which shall remain unaffected by such election);

(iv) if Company makes an election to reduce to zero Company's Development Cost Sharing Percentage and Commercial Sharing Percentage for a Collaboration Product with respect to one or more such Regions, then immediately from and after such election and continuing throughout the remainder of the Term, the definition of the Profit Share Territory shall be and hereby is amended to eliminate such Region(s) entirely, as applicable, from such definition, and such Region(s) shall be included in the Fixed Royalty Territory, in each case only as applicable for such Collaboration Product (but shall not apply to any other Collaboration Product, which shall remain unaffected by such election);

(v) if Company has made such election with respect to a Collaboration Product included in a Combination Regimen, then the reductions described in this Section 3.3(d) shall be made in addition to any reductions described in Section 3.3(c) in respect of such Collaboration Product; and

(vi) if Company makes an election to reduce to zero its Development Cost Sharing Percentage and its Commercial Sharing Percentage for a Collaboration Product with respect to the U.S. Region, then immediately from and after such election and continuing throughout the remainder of the Term certain other rights and obligations of the Parties set forth under this Agreement shall be effected by such election, including as set forth in Sections 2.5(c)(ii), 2.5(c)(iii)(D), 3.1, 3.2, 3.3(e), 3.3(f), 4.2, 5.2, 5.4(b), 6.3 and 13.5(b)(ii).

(e) Opt Out Options for New Indications and Expanded Labels. During the Term so long as the Fixed Royalty Territory does not encompass the entire Territory: (i) on a Collaboration Product-by-Collaboration Product basis, either Party may at any time prior to the date that is **[*]**, elect to cease its participation in Development and the payment of its share for Development for one or more new indications or an expanded label for an existing Collaboration Product, except to the extent that such Party becomes obligated to pay Development Reimbursement Payments upon commencement of the applicable Pivotal Study for the Development for such Collaboration Product that has been subject to such a cessation of sharing ("**Opt Out Development**"), as contemplated by Section 3.3(e); (ii) notwithstanding the foregoing, the Party(ies) that had been allocated responsibility for Development activities with respect to such Opt Out Development shall continue to undertake and complete such Development activities unless the sole remaining paying Party elects to cease all activities for such Opt Out Development (in which case the Parties shall both promptly but appropriately unwind and cease all such Opt Out Development and the JRDC and the JSC shall accordingly amend the applicable Development and Research Plan and applicable Annual Development and Research Plan Budget); (iii) with respect to Opt Out Development that continues to be undertaken by the Party(ies), the Party(ies) shall report on the progress of such Opt Out Development activities at each meeting of the JRDC; and (iv) subject to the immediately following sentence, upon commencement of an applicable Pivotal Study for the applicable Collaboration Product for new indications or an expanded label for an existing Collaboration Product in the Profit Share Territory, then the Party that elected not to pay its share of the costs for such Opt Out Development activities shall **[*]** and pay the other Party pursuant to Section 8.6, an amount equal to **[*]** (such amount, the "**Development Reimbursement Payment**"). For clarity, **[*]**.

(f) Calculation and Payment of Development Costs. During the Term so long as the Fixed Royalty Territory does not encompass the entire Territory: (i) with respect to each Collaboration Product, each Party will keep accurate records of its Development Costs, including appropriately allocating such Development Costs for Development activities for Early Research or to other Development activities to the Fixed Royalty Territory or Profit Share Territory, as applicable (pursuant to Section 3.2); (ii) beginning with the first Calendar Quarter after the Effective Date, each Party shall report to the other Party within **[*]** after the end of

such Calendar Quarter, a report of its Development Costs and Development activities incurred in such Calendar Quarter (each such final report, a **"Development Costs Report**"); (iii) each Development Costs Report shall include a progress report of actual versus budgeted Development Costs allocated to and incurred by the applicable Party during the applicable Calendar Quarter and a forecast of any remaining budgeted Development Costs expected to be incurred in the remaining Calendar Quarters of the respective Calendar Year; (iv) promptly following the exchange of the Development Costs Reports, but no later than **[*]** after the end of the relevant Calendar Quarter, the Parties shall reconcile the amounts due and determine the amount a Party will need to pay to the other Party to result in the sharing of the Development Costs in the proportions described in Section 3.2 (the "**Development Costs Calculation Report**"); (v) the Party who is owed such amount as set forth in the Development Costs Calculation Report shall be paid pursuant to Section 8.6; (vi) following the Effective Date, each Party shall consider in good faith other reasonable procedures proposed by the other Party for sharing financial information in order to permit each Party to close its books periodically in a timely manner; and (vii) in addition, at the request of either Party, the other Party shall provide any supporting documentation of the Development Costs incurred by it as reported in a Development Costs Report.

3.4 Diligence; Standards of Conduct. Each Party shall use Commercially Reasonable Efforts to perform its obligations with respect to the Development of the Collaboration Products (including regulatory matters) set forth in the applicable Development and Research Plan. Each Party shall conduct such activities (including regulatory matters) in a good scientific manner and in compliance with Applicable Law. Each Party agrees that each Clinical Study and each Nonclinical Study with respect to a Collaboration Product that is required to be posted pursuant to Applicable Law or applicable industry codes, including the PhRMA Code or the equivalent industry code of practice, on clinicaltrials.gov or any other similar registry shall be so posted. Unless otherwise agreed upon by the Parties (and as permitted by Applicable Law or applicable industry codes), Novartis shall be responsible for such posting for the Collaboration Products. In the course of the Development of any of the Collaboration Products, neither Party shall use any employee, agent or independent contractor who has been debarred or excluded from participation in government healthcare programs by any Regulatory Authority, or, to the best of such Party's knowledge, is the subject of debarment or exclusion proceedings by a Regulatory Authority or has been convicted pursuant to § 306 of the FD&C Act.

3.5 Development Records and Reports; Inspections.

(a) Each Party shall maintain complete and accurate records (in the form of technical notebooks and/or electronic files where appropriate) of all work conducted by it under each Development and Research Program and all Know-How resulting from such work. Such records shall fully and properly reflect all work done, data generated and results achieved in the performance of each Development and Research Program in sufficient detail and in good scientific manner appropriate for patent and regulatory purposes. Each Party shall have the right to receive copies of such records maintained by the other Party, including in electronic format if maintained in such format, at reasonable times to the extent reasonably necessary to

perform such Party's obligations or exercise its rights under this Agreement, and to obtain access to originals to the extent needed for patent or regulatory purposes. In addition, each Party shall make available to the other Party such other information about its Development and Research Program activities (including Development activities prior to the Effective Date) as may be reasonably requested by the other Party from time to time for purposes of performing its obligations or exercising its rights under this Agreement.

(b) Each Party shall ensure that the other Party's authorized representatives may, during regular business hours and no more than once per Calendar Year, (i) examine and inspect such Party's and its Affiliates' and their respective subcontractors' facilities used by it in the performance of Development activities pursuant to the applicable Development and Research Plan, and (ii) subject to Applicable Law, inspect all data, documentation and work products relating to the activities performed by it, its Affiliates and/or their respective subcontractors, in each case generated pursuant to a Development and Research Plan, provided that in the event that a Party does not have the right to permit the other Party to directly conduct inspections of its subcontractors under subsections (i) and (ii) above, such Party shall use reasonable efforts to obtain such rights and if such Party is unable to obtain such rights, such Party agrees, upon the other Party's request, to conduct such inspections on the other Party's behalf. This right to inspect facilities, data, documentation, and work products relating to the Collaboration Products may be exercised at any time upon **[*]** days advance written notice. Each Party shall be responsible for all costs incurred by it with regard to any inspections conducted pursuant to this Section 3.5(b), which costs shall not be considered Development Costs.

3.6 Development Subcontractors. Either Party may subcontract its Development activities hereunder to one or more Third Parties, provided that (a) the subcontracting Party remains responsible for the work allocated to, and payment to, such subcontractors to the same extent it would if it had done such work itself, including performing the applicable Development activities in accordance with the requirements, timelines and budget set forth in the applicable Development and Research Plan and (b) the subcontractor undertakes in writing to comply with the obligations set forth in Section 9.8.

3.7 Material Transfer.

(a) To facilitate the activities contemplated by this Agreement, either Party (referred to in this Section 3.7 as the "**Transferring Party**") may provide to the other Party (referred to in this Section 3.7 as the "**Material Receiving Party**") certain biological materials, chemical compounds, in vivo models, cell-based assays or research tools owned by or licensed to the Transferring Party (such materials or compounds provided hereunder are referred to, collectively, as "**Materials**") for use by the Material Receiving Party. All transfers of such Materials by the Transferring Party to the Material Receiving Party shall be documented in writing (the "**Transfer Record**"), which Transfer Record shall set forth the type and name of the Material transferred, the amount of Material transferred, the date of the transfer of such Material and the purpose(s) for which such Material may be used by the Material Receiving Party (the "**Purposes**"). Such Purposes may be in furtherance of the activities contemplated by this Agreement, in each case only as such activities are licensed and not subject to restrictive

covenants under this Agreement, or alternatively such Purposes may be narrower due to restrictions and obligations imposed by Third Parties on the use of such Materials. The Parties also agree not to impose any more restrictive uses on the Materials transferred between one another than is necessary to comply with such restrictions and obligations imposed by Third Parties on the use of such Materials.

(b) Except as otherwise provided under this Agreement, all such Materials delivered by the Transferring Party to the Material Receiving Party shall remain the sole property of the Transferring Party, and shall only be used by the Material Receiving Party for the Purposes. The Material Receiving Party shall not cause the Materials to be used by, delivered to or used for the benefit of any Third Party without the prior written consent of the Transferring Party; provided, that without limiting the foregoing, Company may not transfer or otherwise provide to any Third Party any Collaboration Molecule or Collaboration Product without obtaining the prior written consent of the JSC. Further, the Material Receiving Party shall not use the Materials in research or testing involving human subjects, unless expressly agreed by the Transferring Party in writing and where such research and testing is undertaken in accordance with Applicable Law. In addition, the transfer of any Materials hereunder for use in human subjects may only be done in a manner compliant with a duly executed quality agreement between the Parties.

(c) Other than as set forth in Sections 7.1 and 7.2, no licenses are granted between the Parties, including in respect of the Materials or their use.

(d) The Material Receiving Party assumes all liability for Losses which may arise from its use, storage or disposal of the Materials. The Transferring Party shall not be liable to the Material Receiving Party for any Loss or Claim made by the Material Receiving Party, or made against the Material Receiving Party by any Third Party, due to or arising from the use of the Materials, except when caused by the gross negligence or willful misconduct of the Transferring Party, or as otherwise expressly provided for under this Agreement.

Article 4
REGULATORY MATTERS

4.1 Overview. The Development and Research Plan for each Collaboration Product shall set forth the regulatory strategy for seeking Regulatory Approvals for such Collaboration Product.

4.2 Ownership of Regulatory Filings and Regulatory Approvals; Rights of Reference. All Regulatory Filings and Regulatory Approvals with respect to the U.S. that relate to Collaboration Products shall be filed by and held in the name of Company; provided that **[*]**. Other than as set forth in the previous sentence, all Regulatory Filings and Regulatory Approvals that relate to Collaboration Products shall be filed by and held in the name of Novartis. The Party holding a particular Regulatory Filing or Regulatory Approval in a jurisdiction shall be referred to herein as the "**Lead Regulatory Party**" in respect to such Regulatory Filing or Regulatory Approval for such jurisdiction (as applicable, the "**Lead Regulatory Party**").

4.3 Regulatory Meetings and Correspondence.

(a) Generally; Costs. The applicable Lead Regulatory Party shall be responsible for interfacing, corresponding and meeting with Regulatory Authorities in the jurisdictions with respect to the Collaboration Products, unless otherwise stipulated herein. The cost for interfacing, corresponding and meeting with Regulatory Authorities in the Profit Share Territories shall be shared between Parties as Development Costs, except for travel expenses, which the Lead Regulatory Party shall absorb as it incurs such expenses. The cost for interfacing, corresponding and meeting with Regulatory Authorities throughout the Fixed Royalty Territory shall be paid by Novartis as Development Costs, except for travel expenses, which the Novartis shall absorb as it incurs such expenses.

(b) Conduct of Regulatory Activities.

(i) The applicable Lead Regulatory Party shall be responsible for (A) submitting all Regulatory Filings, including applications for Regulatory Approval, relating to the Collaboration Molecules and Collaboration Products, and (B) leading (1) scheduled face-to-face meetings, video conferences and any teleconferences, with the applicable Regulatory Authorities and (2) any preparatory meetings for such meetings with the applicable Regulatory Authorities. The other Party shall have the right to have up to two (2) senior, experienced employees reasonably acceptable to the applicable Lead Regulatory Party, participate (to the extent practicable) as observers in any such face-to-face meetings, video conferences, teleconferences and preparatory meetings. The applicable Lead Regulatory Party shall provide the other Party copies of (1) material documentation prepared for such meetings and (2) material submissions to the applicable Regulatory Authorities relating to Development of, or the process of obtaining Regulatory Approval for, the applicable Collaboration Products, in each case (to the extent practicable) sufficiently in advance of the applicable meeting or submission, as applicable, to allow such other Party a reasonable opportunity to review and provide comment on such materials, and such applicable Lead Regulatory Party shall consider in good faith such other Party's comments with respect thereto.

(ii) The applicable Lead Regulatory Party may delegate to the other Party such responsibility(ies) for interfacing, corresponding and meeting with the applicable Regulatory Authorities with respect to a Collaboration Product as may be mutually agreed upon by the Parties.

4.4 Collaboration Product Withdrawals and Recalls. If (a) any Regulatory Authority threatens, initiates or advises any action to remove any Collaboration Product from the market or requires or advises a Party or any of their respective Affiliates, sublicensees or distributors to distribute a "Dear Doctor" letter or its equivalent regarding use of such Collaboration Product, or (b) either Party determines that an event, incident or circumstance has occurred that may result in the need for a recall or market withdrawal of any Collaboration

Product or distribution of a "Dear Doctor" letter or its equivalent regarding use of such Collaboration Product, then in each case (a) or (b) Company or Novartis, as applicable, shall notify the other Party of such event or determination immediately, and in any event within twenty-four (24) hours (or sooner if required by Applicable Law) after such Party becomes aware of the event or makes such determination. The applicable Lead Regulatory Party for the applicable jurisdictions shall, to the extent practicable, endeavor to discuss and agree with the other Party upon whether to recall or withdraw the Collaboration Product in question; provided, however, that if such discussion is not practicable or if the Parties fail to agree within an appropriate time period (recognizing the exigencies of the situation), then such applicable Lead Regulatory Party shall decide whether to recall or withdraw such Collaboration Product in the applicable jurisdictions.

4.5 Pharmacovigilance Agreement. Within **[*]** following the Effective Date (or as soon as reasonably practicable following such **[*]** period), the Parties shall enter into a written pharmacovigilance agreement governing each Party's respective obligations with respect to allocation of responsibilities for reporting to the other Party and appropriate Regulatory Authorities adverse events, complaints, and other safety-related matters.

Article 5
COMMERCIALIZATION

5.1 Overview; Diligence. The Parties intend and agree to collaborate with one another with respect to the Commercialization of Collaboration Products in the Field in the Territory, as provided in this Article 5 under the direction of the JCC. Novartis shall use Commercially Reasonable Efforts to Commercialize Collaboration Products in the Novartis Promotion Territory after receipt of Regulatory Approval therefor. So long as the U.S. is not included in the Fixed Royalty Territory, Company shall use Commercially Reasonable Efforts to Commercialize Collaboration Products in the U.S. after receipt of Regulatory Approval therefor. In conducting Commercialization activities as provided hereunder, including in setting the prices and other commercial terms for the Collaboration Products, each Party shall endeavor in good faith to maximize the economic value of the Collaboration Products to the Parties.

5.2 Commercialization.

(a) So long as Company has not elected under Section 3.3(d) to reduce Company's Development Cost Sharing Percentage with respect to the U.S., Company shall be the commercial lead for the U.S. From and after **[*]**, Novartis shall be the commercial lead for the U.S. At all times during the Term, Novartis shall be the commercial lead throughout the Territory outside of the U.S. The commercial lead, with respect to the U.S. or the Territory outside the U.S., respectively, shall be referred to herein as the "**Lead Commercialization Party**" for such jurisdiction (as applicable, the "**Lead Commercialization Party**").

(b) The applicable Lead Commercialization Party shall implement and have sole authority and responsibility for the Commercialization of Collaboration Products in the U.S. and Territory outside the U.S., in each case in accordance with the applicable Commercialization Plan and the terms of this Agreement. The applicable Lead Commercialization Party shall book all monies

received by Selling Parties from Third Party customers for sale of Collaboration Products. All business decisions regarding Commercialization of Collaboration Products in the U.S. and Territory outside the U.S. shall be within the sole discretion of the applicable Lead Commercialization Party. All materials used in the promotion of all Collaboration Products in the U.S. and Territory outside the U.S., including product packaging, materials used in detailing doctors, product messaging and content used in the promotion of such Collaboration Products, shall be within the sole discretion of the applicable Lead Commercialization Party. The applicable Lead Commercialization Party shall permit the other Party, through its representatives on the JCC, to provide advice and commentary with respect to Commercialization activities performed by or on behalf of the applicable Lead Commercialization Party or the other Party, and the applicable Lead Commercialization Party shall in good faith consider any such advice and commentary; and such other Party shall cooperate and assist with the applicable Lead Commercialization Party's Commercialization activities at the reasonable request of such applicable Lead Commercialization Party.

(c) At least **[*]** prior to the anticipated First Commercial Sale of a Collaboration Product in the U.S. and Territory outside the U.S., the applicable Lead Commercialization Party shall submit to the JCC a comprehensive plan (each, a "**Commercialization Plan**") that describes the pre-launch, launch and subsequent Commercialization of such Collaboration Product in the U.S. or the Territory outside the U.S., as applicable, (including anticipated activities relating to messaging, branding, pricing, advertising, planning, marketing, sales force training and allocation, and distribution), and strategies for implementing those activities and the associated budget for such activities. The applicable Lead Commercialization Party shall permit the other Party, through its representatives on the JCC, to provide advice and commentary on such Commercialization Plan, and the applicable Lead Commercialization Party shall in good faith consider any such advice and commentary. On an annual basis, or more often as the Parties deem appropriate, the applicable Lead Commercialization Party shall prepare amendments to the then-current applicable Commercialization Plans and shall submit such amendments to the JCC for review and comment by the other Party. The applicable Lead Commercialization Party shall not be required to obtain the JCC's approval of the applicable Commercialization Plan or any amendment thereto prior to its implementation; provided, however, that the applicable Lead Commercialization Party may not allocate responsibility for any Commercialization activity to the other Party in the Commercialization Plan or amendment thereof unless such allocation has been approved by such other Party.

5.3 Global Branding Strategy. For each Collaboration Product, the JCC shall develop (and thereafter update from time to time, in each case with the approval of the JSC) a global branding strategy, including global positioning and global brand elements, for such Collaboration Product for use in the Field in the Territory (each, a "**Global Branding Strategy**"). Novartis shall use Commercially Reasonable Efforts to implement the Global Branding Strategy for the Commercialization of Collaboration Products in the Novartis Promotion Territory. So long as the U.S. is not included in the Fixed Royalty Territory, Company shall use Commercially Reasonable Efforts to implement the Global Branding Strategy for the Commercialization of Collaboration Products in the U.S.

5.4 Commercialization Costs.

(a) Allocation of Commercialization Costs for the Fixed Royalty Territory. Novartis shall be responsible for one hundred percent (100%) of all Commercialization Costs incurred by it with respect to each Collaboration Product in the Fixed Royalty Territory.

(b) Allocation of Commercialization Costs for the Profit Share Territory. During the Term so long as the Fixed Royalty Territory does not encompass the entire Territory, Novartis and Company shall be responsible for their respective Commercial Sharing Percentage of all Collaboration Costs incurred by the Parties with respect to the applicable Regions in the Profit Share Territory for each Collaboration Product.

(c) Calculation and Payment of Commercialization Costs. With respect to each Collaboration Product, each Party will keep accurate records of its Commercialization Costs, including appropriately allocating such Commercialization Costs to the Fixed Royalty Territory or Profit Share Territory, as applicable (pursuant to Sections 5.4(a) and 5.4(b)). Beginning with the first Calendar Quarter after the Effective Date, each Party shall report to the other Party within **[*]** after the end of such Calendar Quarter, a report of its Commercialization Costs and associated activities, by applicable Region of the Profit Share Territory, incurred in such Calendar Quarter of all of such Commercialization Costs (each such report, a "**Commercialization Costs Report**"); provided that the Commercialization Costs Report shall also include those Commercialization Costs incurred by a Party for the period beginning on the Effective Date and ending on the day immediately before the first day of the first full Calendar Quarter of the Term. Each Commercialization Costs Report shall include a progress report of actual versus budgeted Commercialization Costs allocated to and incurred by the applicable Party during the applicable Calendar Quarter and a forecast of any remaining budgeted Commercialization Costs expected to be incurred in the remaining Calendar Quarters of the respective Calendar Year. Promptly following the exchange of the Commercialization Costs Reports, but no later than **[*]** after the end of the relevant Calendar Quarter, Novartis shall submit to Company a report reconciling the calculation of the amount a Party will need to pay to the other Party to result in the sharing of the Commercialization Costs in the proportions described in Section 5.4(a) and 5.4(b), as applicable (the "**Commercialization Costs Calculation Report**"). The Party who is owed such amount as set forth in the Commercialization Costs Calculation Report shall be paid pursuant to Section 8.6, so that each of Company and Novartis has borne its respective share of the Commercialization Costs as set forth hereunder. Following the Effective Date, each Party shall consider in good faith other reasonable procedures proposed by the other Party for sharing financial information in order to permit each Party to close its books periodically in a timely manner. In addition, at the request of either Party, the other Party shall provide any supporting documentation of the Commercialization Costs incurred by it as reported in a Commercialization Costs Report.

5.5 Diligence; Standards of Conduct. Each Party shall use Commercially Reasonable Efforts to perform its obligations with respect to the Commercialization of the Collaboration Products (including regulatory matters) set forth in the applicable Commercialization Plan. In the course of the Commercialization of any of the Collaboration Products, neither Party shall use any employee, agent or independent contractor who has been debarred or excluded from participation in government healthcare programs by any Regulatory Authority, or, to the best of such Party's knowledge, is the subject of debarment or exclusion proceedings by a Regulatory Authority or has been convicted pursuant to § 306 of the FD&C Act.

5.6 Commercialization Subcontractors. Novartis may subcontract its Commercialization activities hereunder to one or more Third Parties. So long as the U.S. is not included in the Fixed Royalty Territory, Company may subcontract up to **[*]** of its activities directed to **[*]** in the U.S. hereunder to one or more Third Parties, and, further, Company may, after obtaining the prior consent of Novartis, not to be unreasonably withheld, subcontract over **[*]** of such activities to one or more Third Parties, provided that in each case (a) the subcontracting Party remains responsible for the work allocated to, and payment to, such subcontractors to the same extent it would if it had done such work itself, including performing the applicable Commercialization activities in accordance with the requirements, timelines and budget set forth in the applicable Commercialization Plan, and (b) the subcontractor undertakes in writing to comply with the obligations set forth in Section 9.8. In addition, with respect to any material subcontracting of U.S. Commercialization activities, Company agrees to consider in good faith the capabilities, availability and costs of using Novartis as a subcontractor for such activities, provided that the decision as to the party to be used will be Company's, in its sole discretion.

5.7 Reporting. Each Party shall keep the JCC fully informed regarding the progress and results of such Party's Commercialization activities for each Collaboration Product throughout the Territory, including providing their respective quarterly results and annual reviews of results versus goals. Each Party shall reasonably cooperate in good faith to provide assistance to the other Party in order to translate financial information and results from one set of Accounting Standards to the other set, as reasonably necessary, in order to facilitate and satisfy each Party's external reporting obligations and objectives.

5.8 Commercialization Standards of Conduct.

(a) Each Party shall, and shall cause its Affiliates and its subcontractors and distributors to, in all respects comply with all Applicable Law in Developing and Commercializing Collaboration Products, in the Field in the Territory, including to the extent applicable, the Foreign Corrupt Practices Act of 1977, as amended ("**FCPA**"); the UK Bribery Act 2010, Chapter 23, as amended ("**UK Bribery Act**"); the FD&C Act; the Public Health Service Act, as amended; the Prescription Drug Marketing Act of 1987, as amended; Federal Health Care Program Anti-Kickback Law (42 U.S.C. § 1320a-7b), as amended; the Health Insurance Portability and Accountability Act of 1996, as amended; the FDA Guidance for Industry-Supported Scientific and Educational Activities; and all federal, state and local "fraud

and abuse," consumer protection and false claims statutes and regulations, including the Medicare and State Health Programs Anti-Fraud and Abuse Amendments of the Social Security Act and the "Safe Harbor Regulations" found at 42 C.F.R. § 1001.952 et seq.; the Office of the Inspector General's Compliance Guidance Program, the Pharmaceutical Research and Manufacturers of America Code on Interactions with Healthcare Professionals, as hereafter amended from time to time; the standards set forth by the Accreditation Council for Continuing Medical Education relating to educating the medical community in the Territory; 42 U.S.C. § 1320a-7h and its implementing regulations (also known as the National Physician Payment Transparency Program and the Open Payments Program) ("**Sunshine Act**"); and all foreign statutory and non-statutory equivalents in the Territory of any of the foregoing; provided that with respect to the Sunshine Act, each Party shall be responsible for reporting payments or other transfers of value actually made by such Party, and each Party shall use Commercially Reasonable Efforts to cooperate with the other Party to coordinate such disclosure. Each Party represents and warrants to the other Party that, as of the Effective Date, such Party and its Affiliates have adequate procedures in place to support their compliance with the FCPA and the UK Bribery Act in the Territory. Each Party and its Affiliates shall maintain such procedures throughout the Term and shall promptly notify the other Party in writing with respect to any material non-compliance with any Applicable Law regarding the Development or Commercialization of a Collaboration Product in the Field in the Territory.

(b) Each Party and its Affiliates shall not, and shall use Commercially Reasonable Efforts to cause its subcontractors and distributors not to, directly or indirectly, promote or market any Collaboration Product (i) in any country in the Territory for which such Persons are not authorized to promote or market under or are not authorized to promote or market pursuant to this Agreement or (ii) for any use or indication not approved by the applicable Regulatory Authority in such country.

(c) Each Party shall, and shall cause its Affiliates, subcontractors and distributors to, ensure that all of its and their Sales Representatives promoting Collaboration Products (i) have skills, training and experience generally consistent with industry standards in the applicable country in the Territory applicable to the promotion, marketing and sale of prescription pharmaceutical products in such country and (ii) have satisfactorily completed all Collaboration Product-specific training and ethics and compliance training required by such Party.

(d) Each Party shall not, and shall cause its Affiliates, subcontractors and distributors, and its and their respective Sales Representatives not to, (i) make any statement, representation or warranty, oral or written, concerning any Collaboration Product in any country in the Territory, or use any labeling, literature or promotional or marketing material for any Collaboration Product in any country in the Territory that (A) is contrary to or inconsistent with Regulatory Approval for such Collaboration Product in such country in a manner that violates any Applicable Law in such country or (B) violates any Applicable Law in such country or (ii) make any arrangements with, make payments to or provide gifts or other incentives to any healthcare professionals in violation of Applicable Law in such country. Each Party shall, and shall cause its Affiliates and its subcontractors and distributors to, ensure that its and their Sales

Representatives are familiar with the procedures, obligations, rights and responsibilities imposed by the terms of this Agreement as applicable to the performance of promotional activities hereunder. Each Party shall, and shall cause its Affiliates, subcontractors and distributors to, maintain records of its and their Sales Representatives' activities.

Article 6
MANUFACTURE AND SUPPLY

6.1 Overview. The Parties shall be responsible for the Manufacture and supply of each Collaboration Product for Development and Commercialization throughout **[*]**. **[*]** responsible for the supply of Collaboration Product for Development and Commercialization throughout **[*]**.

6.2 Development of Manufacturing Process; Certain Clinical Supply. Subject to Section 6.1 and with respect to each Collaboration Product, **[*]** shall lead the development of the manufacturing process for such each Collaboration Product, in consultation with **[*]**. The reasonable and actual cost of Manufacturing process development and scale-up shall be shared as Development Costs. Novartis and Company shall agree upon a manufacturing chain for clinical supplies that meets all relevant regulatory requirements and guidelines and ensures that each Party has supply sufficient for Development.

6.3 Commercial Supply Agreement for the U.S. During the Term so long as the Fixed Royalty Territory does not encompass the entire Territory, at least one year prior to the anticipated filing of an NDA for each Collaboration Product in the U.S., at least the Parties will enter into a commercially reasonable and mutually agreeable commercial supply agreement for the U.S. pursuant to which (i) Novartis would supply such Collaboration Product for the U.S. at a mark-up to be negotiated, with such mark-up ultimately netted out of the share of profits, (ii) supply of Collaboration Product shall be allocated throughout the Profit Share Territory in a fair and equitable manner, (iii) Company would be permitted to establish, qualify and maintain a second source of supply of up to 20% of its anticipated requirements of Collaboration Product for the U.S., with the costs therefor to be shared as Commercialization Costs and (iv) Company would be permitted to obtain up to 100% of its supply from the second source in the event of a supply shortage or supply failure.

Article 7
GRANT OF RIGHTS

7.1 Rights Granted to Novartis.

(a) Development. Subject to the terms and conditions of this Agreement, during the Term, Company hereby grants to Novartis and its Affiliates a co-exclusive (with Company and its Affiliates) licensable (only pursuant to Section 7.1(e)) right in the Territory under Company Patents and Company Know-How solely to undertake Development activities for the Collaboration Products in the Field to the limited extent contemplated by and authorized pursuant to this Agreement.

(b) Commercialization in the U.S. Subject to the terms and conditions of this Agreement and so long as the U.S. is not included in the Fixed Royalty Territory, during the Term, Company hereby grants to Novartis and its Affiliates a non-exclusive licensable (only pursuant to Section 7.1(e)) right in the U.S. under Company Patents and Company Know-How solely to provide support requested by Company in connection with the Commercialization of Collaboration Products in the Field in the U.S. pursuant to Section 5.2, but only to the extent contemplated by and authorized by Company in a prior writing pursuant to this Agreement.

(c) Commercialization in the Novartis Promotion Territory. Subject to the terms and conditions of this Agreement, during the Term, Company hereby grants to Novartis and its Affiliates an exclusive (even as to Company and its Affiliates) licensable (only pursuant to Section 7.1(e)) right in the Novartis Promotion Territory under Company Patents and Company Know-How solely to Commercialize Collaboration Products in the Field in the Novartis Promotion Territory to the extent contemplated by and authorized pursuant to this Agreement.

(d) Manufacture. Subject to the terms and conditions of this Agreement, Company hereby grants to Novartis and its Affiliates a co-exclusive (with Company and its Affiliates) licensable (only pursuant to Sections 6 and 7.1(e)) right in the Territory under Company Patents and Company Know-How solely to undertake Manufacturing activities for the Collaboration Products in the Field to the extent contemplated by and authorized pursuant to this Agreement and any other written agreement of the Parties.

(e) Rights to Further License. Subject to the terms and conditions of this Agreement, each Party may license the rights granted to it by the other Party under this Agreement to such Party's and its Affiliates' respective subcontractors, distributors and other service providers providing assistance to such Party and its Affiliates in their Development, Manufacturing and/or Commercialization of the Collaboration Products for the benefit of the Parties to the extent contemplated by and authorized pursuant to this Agreement; and other licensing of such rights granted to a Party under this Agreement shall not be undertaken without the consent of the other Party.

7.2 Rights Granted to Company.

(a) Development. Subject to the terms and conditions of this Agreement, during the Term, Novartis hereby grants to Company and its Affiliates a co-exclusive (with Novartis and its Affiliates), licensable (only pursuant to Section 7.2(d)) right in the Territory under the Novartis Patents and Novartis Know-How solely to undertake Development activities for the Collaboration Products in the Field to the limited extent contemplated by and authorized pursuant to this Agreement.

(b) Commercialization in the U.S. Subject to the terms and conditions of this Agreement and so long as the U.S. is not included in the Fixed Royalty Territory, during the Term, Novartis hereby grants to Company and its Affiliates a co-exclusive (with Novartis and its Affiliates), licensable (only pursuant to Section 7.2(d)) right in the U.S. under the Novartis Patents and Novartis Know-How solely to Commercialize Collaboration Products in the Field in the U.S. to the extent contemplated by and authorized pursuant to this Agreement.

(c) Manufacture. Subject to the terms and conditions of this Agreement, Novartis hereby grants to Company and its Affiliates a co-exclusive with Novartis and its Affiliates, licensable (only pursuant to Sections 6 and 7.1(e)) right in the Territory under the Novartis Patents and Novartis Know-How solely to undertake Manufacturing activities for the Collaboration Products in the Field to the extent contemplated by and authorized pursuant to this Agreement and any other written agreement of the Parties.

(d) Rights to Further License. Subject to the terms and conditions of this Agreement, Company may license the rights granted to it by Novartis under this Agreement to Company's and its Affiliates' respective subcontractors, distributors and other service providers providing assistance to Company and its Affiliates in their Development of the Collaboration Products for the benefit of the Parties to the extent contemplated by and authorized pursuant to this Agreement. Other licensing of such rights granted to it by Novartis under this Agreement shall not be undertaken without the consent of Novartis.

7.3 No Implied Licenses. Except as explicitly set forth in this Agreement, neither Party grants to the other Party any license, express or implied, under the Patent Rights, Know-How or any other intellectual property rights Controlled by such Party.

7.4 Retained Rights.

(a) Notwithstanding anything that may be construed to the contrary herein, Company retains the right to use Company Technology in order to Develop, Commercialize and otherwise exploit products and services in any field throughout the world, other than Collaboration Products in the Field, but never the same product with the same formulation as a Collaboration Product. For the avoidance of doubt, and without prejudice to the rights granted herein to Novartis, no license or right is granted in this Agreement to Novartis to Develop or Commercialize any product or product platform technology owned or controlled by Company (including any **[*]**) that is not a STING agonist.

(b) Notwithstanding anything that may be construed to the contrary herein, Novartis retains the right to use Novartis Technology in order to Develop, Commercialize and otherwise exploit products and services in any field throughout the world, other than Collaboration Products in the Field, but never the same product with the same formulation as a Collaboration Product. For the avoidance of doubt, and without prejudice to the rights granted herein to Company, no license or right is granted in this Agreement to Company to Develop or Commercialize any product or product platform technology owned or controlled by Novartis (including any **[*]**) that is not a STING agonist.

Article 8
FINANCIAL TERMS

8.1 Upfront Fee. In consideration of the licenses and rights granted to Novartis hereunder, Novartis shall pay to Company a one-time, non-refundable, non-creditable upfront payment of Two Hundred Million U.S. Dollars (US$200 Million), within **[*]** Business Days after the Effective Date.

8.2 Milestone Payments. In further consideration of the licenses and other rights granted to Novartis, upon achievement of each of the milestone events (each, a "**Milestone**") set forth in the table immediately below, Novartis shall pay the corresponding one-time milestone payment (each, a "**Milestone Payment**") to Company.

Milestone number	Milestone event	Milestone Payment
1	**[*]**	US$**[*]**
2	**[*]**	US$**[*]**
3	**[*]**	US$**[*]**
4	**[*]**	US$**[*]**
5	**[*]**	US$**[*]**
6	**[*]**	US$**[*]**
7	**[*]**	US$**[*]**

(a) Clarifications.

(i) Milestone numbers 1, 2, 3, 5, 6 and 7 may each be achieved and become payable only once. Milestone number 4 may be achieved and become payable up to three (3) times (i.e., in total, up to US$**[*]**).

(ii) If Milestone number 1 is not achieved, then, effective upon achievement of Milestone numbers 2, 3, 4 (even only once), 5 or 6, as applicable, then Milestone number 1 shall also be due and payable even though the missing Milestone number 1 has not been achieved. If Milestone number 2 is not achieved, then, effective upon achievement of Milestone number 4 (even only once), 5 or 6, as applicable, then Milestone number 2 shall also be due and payable even though the missing Milestone number 2 has not been achieved. If Milestone number 3 is not achieved, then, effective upon achievement of Milestone number 4 (even only once), 5 or 6, as applicable, then Milestone number 3 shall also be due and payable even though the missing Milestone number 3 has not been achieved. To the extent Milestone number 4 is not achieved three (3) times, then, effective upon achievement of Milestone number 5 or 6, as applicable, then Milestone number 4 shall also be due and payable, taken together with any past achievement of Milestone number 4, as having been achieved **[*]**. For the avoidance of doubt, achievement of Milestone number 7 shall not itself trigger the payment of any previous

Milestones and shall only trigger the payment of the Milestone Payment that corresponds to Milestone number 7. In no event will the total payments made in accordance with this Section 8.2 total to more than US$500 Million.

(iii) Any payments made by Novartis in accordance with Sections 8.1 and 8.2 shall, once they are paid, not be refundable nor creditable.

(b) Milestone Payments. On or after the achievement of a Milestone, Company shall send a notice of such achievement in writing to Novartis and submit an invoice to Novartis in the form separately to be confirmed between the Parties with respect to the corresponding Milestone Payment. Unless otherwise disputed by Novartis in good faith in accordance with Section 15.2, Novartis shall pay to Company such Milestone Payment within **[*]** after receipt of such invoice.

8.3 Royalty Payments for the Fixed Royalty Territory.

(a) Fixed Royalty Territory. During the applicable Royalty Term, in further consideration of the rights granted by Company to Novartis hereunder, following the First Commercial Sale of a Collaboration Product in a country in the Fixed Royalty Territory and throughout the remainder of the applicable Royalty Term, subject to reduction as provided under Section 8.5(c), Novartis shall make royalty payments to Company equal to **[*]** of the amount of Net Sales of such Collaboration Product in such country within the Fixed Royalty Territory in each Calendar Year; provided, however after the later of (i) the date of expiration, lapse, or invalidation of the last Valid Claim (whether such Valid Claim is a Valid Claim under a Company Patent, Novartis Patent or Joint Patent) Covering such Collaboration Product in such country, and (ii) expiration of data exclusivity as conferred by a competent Regulatory Authority for such Collaboration Product in such country, and continuing throughout the remainder of the Royalty Term, the royalty payments due hereunder shall be reduced by **[*]** from what otherwise would be payable by Novartis to Company under this Agreement. Further, upon the expiration of the Royalty Term for a Collaboration Product in a country in the Fixed Royalty Territory, the licenses granted to Novartis under this Agreement with respect to such Collaboration Product in such country shall become fully paid-up, royalty free licenses, which shall continue even after the termination of this Agreement.

(b) Clarifications.

(i) Any payments made by Novartis in accordance with this Section 8.3 shall, once they are paid, not be refundable nor creditable for any reason whatsoever (including but not limited to termination of this Agreement for any reason or no reason).

(ii) Royalties will be payable on a Collaboration Product-by-Collaboration Product and country-by-country basis within the Fixed Royalty Territory during the applicable Royalty Term. Royalties shall be payable only once with respect to the sale of the same unit of Collaboration Product.

(c) Sales and Royalty Report. Within **[*]** after each Calendar Quarter during the Term following the First Commercial Sale of a Collaboration Product in any country of the Fixed Royalty Territory, Novartis will provide to Company a Sales & Royalty Report. Company shall be paid the royalties indicated in the Sales & Royalty Report pursuant to Section 8.6.

8.4 Profit Share Payments. Following the First Commercial Sale of a Collaboration Product in the Profit Share Territories and throughout the remainder of the Term for such Collaboration Product, each Party who is not the Lead Commercialization Party shall be entitled to receive their respective Commercial Sharing Percentage of Gross Profits on sales of such Collaboration Product in the Profit Share Territory, as applicable to each Region within the Profit Share Territory. To give effect to the foregoing:

(a) within **[*]** days after the end of each Calendar Quarter following such First Commercial Sale, the Lead Commercialization Party shall report to the other Party sales of such Collaboration Product in each Profit Share Territory made by or behalf of such Party, including by providing the other Party with a Sales & Profit Share Report for their respective sales of Collaboration Products in each Profit Share Territory; and

(b) following receipt of such information, the Parties shall reconcile, calculate and determine what payments are to be made between the Parties to give effect to the appropriate allocation of Gross Profits as contemplated under this Section 8.4 and the Party to be paid, shall be paid pursuant to Section 8.6.

8.5 Third Party Obligations.

(a) Existing Third Party Licenses. Novartis and Company shall, at a mutually agreed time, execute separate sublicenses of the Existing Third Party Licenses based on the form set forth in Exhibit 8.5 and acceptable to both Parties. Company shall duly pay when due any and all amounts due under each Existing Third Party License. **[*]** To the extent an Existing Third Party License requires payment of **[*]** based on the Development or Commercialization of a Collaboration Product (but excluding **[*]**) to an Existing Third Party Licensor ("**Shared Existing Third Party Payments**"), which are attributable to Collaboration Products in a Profit Share Territory or globally, such amounts shall **[*]** if the Collaboration Product has had its First Commercial Sale anywhere in the Territory or Development Costs if the Collaboration Product has not had its First Commercial Sale anywhere in the Territory, as the case may be, except to the extent any such amounts payable solely relate to the Fixed Royalty Territory. Further, in respect of **[*]** payments made by Company under the Existing Third Party Licenses solely for the Fixed Royalty Territory, Novartis or its Affiliates shall reimburse Company for such payments in an amount equal to **[*]** (as such term is used and defined in the applicable Existing Third Party Agreements) in the Fixed Royalty Territory (such reimbursed amounts, the "**Novartis Existing Fixed Royalty Territory Payments**"), such **[*]** to be paid quarterly on the same schedule as **[*]**. For the avoidance of doubt, Company shall be solely responsible for, and shall hold harmless Novartis and its Affiliates from and against, any and all obligations and liabilities to any Existing Third Party License for **[*]**, and **[*]** shall not be included in Commercialization Costs or Development Costs, or otherwise required to be shared between the Parties.

(b) New Third Party Licenses.

(i) In the event that the JSC determines, after reasonable discussion and consultation between the Parties, that Patent Rights or other intellectual property rights owned or Controlled by a Third Party other than Patent Rights or any other intellectual property rights that are addressed by the Existing Third Party Licenses should be licensed or acquired in order to Develop, Manufacture, use or Commercialize a Collaboration Product anywhere in the Territory ("**New Third Party Licenses**"), with the goal of the Parties treating such rights in a manner as similar as possible to that of Joint Patents and Joint Know-How, Novartis or its Affiliates shall enter into the agreement with such Third Party to secure such Patent Rights and/or other intellectual property rights. The costs of obtaining such rights shall be shared by the Parties under this Agreement as follows: (A) any and all amounts payable to such Third Parties by Novartis or its Affiliates to obtain and exercise such rights shall **[*]** if the Collaboration Product has had its First Commercial Sale anywhere in the Territory or Development Costs if the Collaboration Product has not had its First Commercial Sale anywhere in the Territory, as the case may be, except to the extent any such amounts payable solely relate to the Fixed Royalty Territory, and (B) royalty payments payable to such Third Parties that solely relate to the Fixed Royalty Territory (the "**Novartis New Fixed Royalty Territory Payments**") shall be shared through the royalty deduction mechanism set out below in Section8.5(c).

(ii) If Novartis elects to designate intellectual property as Later Acquired Novartis Technology, then the costs of obtaining such rights shall be shared by the Parties under this Agreement as follows: (A) any and all amounts payable to such Third Parties by Novartis or its Affiliates to obtain and exercise such rights shall **[*]** if the Collaboration Product has had its First Commercial Sale anywhere in the Territory or Development Costs if the Collaboration Product has not had its First Commercial Sale anywhere in the Territory, as the case may be, except to the extent any such amounts payable solely relate to the Fixed Royalty Territory, but (B) none of the royalty payments payable to such Third Parties that solely relate to the Fixed Royalty Territory shall be paid by Company (all of which shall be paid by Novartis).

(iii) If Company elects to designate intellectual property as Later Acquired Company Technology, then the costs of obtaining such rights shall be shared by the Parties under this Agreement as follows: (A) any and all amounts payable to such Third Parties by Company or its Affiliates to obtain and exercise such rights shall **[*]** if the Collaboration Product has had its First Commercial Sale anywhere in the Territory or Development Costs if the Collaboration Product has not had its First Commercial Sale anywhere in the Territory, as the case may be, except to the extent any such amounts payable solely relate to the Fixed Royalty Territory, but (B) none of the royalty payments payable to such Third Parties that solely relate to the Fixed Royalty Territory shall be paid by Novartis (all of which shall be paid by Company).

(c) Royalty Deductions. Novartis may reduce the royalty payments to Company on Net Sales of any given Collaboration Product in a given Calendar Year by **[*]** of

the amount of the sum of **[*]** plus the **[*]** so long as royalty payments from Novartis to Company are not less than **[*]** of the aggregate amount of Net Sales of each Collaboration Product within the Fixed Royalty Territory in such Calendar Year. If any portion of the amount of such payments entitled to be deducted by Novartis from royalties are not deducted by reason of the operation of the limitations set forth in the last proviso of the preceding sentence, such portion will be carried over and deducted against subsequent royalty payments until the full amount that Novartis would have been entitled to deduct but for the operation of such limitations is deducted.

8.6 Form of Payment; Currency. Notwithstanding anything to the contrary, all amounts to be paid under this Agreement in a Calendar Quarter during the Term other than any Milestone Payments or the upfront fee payment due under Section 8.1 (collectively, "**Payments**") shall be paid as follows: (a) Payments related to Development Cost sharing (Section 3.3(f)), Commercial Cost sharing (Section 5.4(c)), Profit Share Payment (Section 8.3) and Fixed Royalty Territory Royalties Section (8.4) as well as pertinent Royalty Deductions (Section 8.5(c)) will be reconciled by the Parties within **[*]** following the end of each Calendar Quarter to establish the amount(s) to be paid by a Party (the "**Payor**") to the other Party ("**Payee**") in respect of, and in satisfaction of, all such Payments between the Parties that became due and payable in such Calendar Quarter. Promptly thereafter Payee shall invoice the Payor for such amount(s) that is to be paid to it by the Payor; and (b) within **[*]** of the Payor's receipt of such invoice from Payee, the Payor shall remit such payment to Payee. For the avoidance of doubt: (i) to the extent either Party disputes any Payment or portion thereof, then the undisputed portions of all such Payments shall still be paid pursuant to the foregoing provisions, and (ii) Milestone Payments shall be paid in accordance with 8.2(b) as and when they become due and payable. All payments from a Party to the other Party shall be made by wire transfer in immediately available funds in U.S. Dollars to the credit of such bank account as may be designated by the other Party in this Agreement or in writing to such Party. Any payment which falls due on a date which is not a Business Day may be made on the next succeeding Business Day. When conversion of payments from any foreign currency is required to be undertaken by a Party, the U.S. Dollar equivalent shall be calculated using such Party's then-current standard exchange rate conversion methodology as applied in its external reporting, which shall be in accordance with applicable Accounting Standards.

8.7 Late Payments. If a Party does not receive payment of any sum due to it within **[*]** of the due date therefor, simple interest shall thereafter accrue on a daily basis on the sum due to such Party from the due date until the date of payment at a per-annum rate of LIBOR plus **[*]** or the maximum rate allowable by Applicable Law, whichever is less.

8.8 Taxes. Each Party will provide timely and accurate documentation to the other Party upon request that shall enable the Parties to determine if a payment is subject to withholding, or entitled to reduced withholding under an existing income tax treaty. Each Party will pay any and all taxes levied on account of any payments made to it under this Agreement. If any taxes are required to be withheld by a Party, such Party will: (a) deduct such taxes from the payment made to the other Party; (b) timely pay the taxes to the proper taxing authority; (c) send proof of payment to the Party; and (d) reasonably assist the other Party in its efforts to

obtain a credit for such tax payment. Each Party agrees to reasonably assist the other Party in lawfully claiming exemptions from and/or minimizing such deductions or withholdings under double taxation laws or similar circumstances. On or before the Effective Date, Company shall provide to Novartis a complete, accurate and properly executed Internal Revenue Service Form W-8BEN-E, or other applicable IRS Form.

8.9 Records and Audit Rights.

(a) Financial Records. Each Party shall keep complete and accurate books and records with respect to activities undertaken pursuant to this Agreement in accordance with Accounting Standards and in sufficient detail to support calculations of all payments that may become due hereunder. Each Party will keep such books and records for the longer of (i) **[*]** following the end of the Calendar Year to which they pertain and (ii) the expiry of the applicable statute of limitations for tax.

(b) Audits.

(i) Each Party shall have the right to appoint an internationally-recognized independent certified public accounting firm (which is reasonably acceptable to the other Party) (the "**Auditor**") to audit the relevant books and records of the other Party and the correctness of any payments made or required to be made to or by the other Party pursuant to the terms of this Agreement. Before beginning its audit, the Auditor shall execute an undertaking reasonably acceptable to the other Party by which the Auditor shall keep confidential all information reviewed during such audit. The Auditor shall have the right to disclose to the auditing Party only its conclusions regarding any payments owed under this Agreement.

(ii) The audited Party shall make its books and records available for inspection by such Auditor during regular business hours at such place or places where such books and records are customarily kept, upon receipt of reasonable advance notice from the other Party, solely to verify the accuracy of the payments to be made hereunder. The Auditor may only audit the books and records of the audited Party from the **[*]** prior to the Calendar Year in which the audit request is made. Such inspection right shall not be exercised more than once in any Calendar Year and not more frequently than once with respect to books and records covering any specific period of time. All information received and all information learned by a Party in the course of any audit or inspection shall constitute Confidential Information of the other Party.

(iii) The auditing Party shall pay for the cost of the Auditor, as well as its own expenses associated with enforcing its rights with respect to any payments hereunder, except that in the event there is any upward adjustment in aggregate amounts payable for any Calendar Year shown by such audit of more than **[*]** of the amount paid, the audited Party shall pay for the cost of the Auditor.

(iv) If, after conducting an audit pursuant to this Section 8.9(b), the Auditor concludes that additional payments were due hereunder, then the audited Party shall make such make such additional payments to the other Party pursuant to Section 8.6.

8.10 No Projections. Company and Novartis acknowledge and agree that nothing in this Agreement shall be construed as representing an estimate or projection of anticipated sales of any Collaboration Product, and that the Milestones, Net Sales and Gross Profits levels set forth above or elsewhere in this Agreement or that have otherwise been discussed by the Parties are merely intended to define the Milestone Payments or royalty obligations in the event such Milestones or Net Sales levels are achieved. NEITHER PARTY MAKES ANY REPRESENTATION OR WARRANTY, EITHER EXPRESS OR IMPLIED, THAT EITHER PARTY WILL BE ABLE TO SUCCESSFULLY DEVELOP OR COMMERCIALIZE ANY COLLABORATION PRODUCT OR, IF COMMERCIALIZED, THAT ANY PARTICULAR MILESTONE, NET SALES LEVEL OR GROSS PROFIT LEVEL OF SUCH COLLABORATION PRODUCT WILL BE ACHIEVED.

Article 9
INTELLECTUAL PROPERTY

9.1 Ownership of Pre-Existing Inventions. As between the Parties, Company shall own Company Patents and Company Know-How existing on the Effective Date, and Novartis or its Affiliates shall own Novartis Patents and Novartis Know-How existing on the Effective Date.

9.2 Disclosure of Inventions and Inventorship Determinations. Each Party shall promptly disclose to the other Party all inventions and discoveries that are conceived, discovered or otherwise made by or on behalf of such Party in the course of conducting activities under this Agreement, whether or not patentable, and all Joint Inventions, in each case including all invention disclosures or other similar documents submitted to such Party by its, or its Affiliates', subcontractors' or sublicensees' directors, officers, employees, representatives or agents describing such inventions, as applicable ("**Disclosed Inventions**"). Each Party shall not take any steps with respect to filing of a patent or other form of intellectual property protection for any such Disclosed Inventions before the inventorship of such Disclosed Invention is determined by intellectual property counsel for each Party through good faith consultation. In the event of a dispute as to the inventorship of such Disclosed Invention, the Parties shall submit the dispute to an independent intellectual property counsel mutually agreed upon by the Parties, whose decision as to inventorship shall be considered final.

9.3 Ownership of Program Inventions. Each Party shall own an equal, undivided interest in all inventions, and discoveries that are conceived, discovered or otherwise made or reduced to practice by or on behalf of either or both Parties (or their respective Affiliates, subcontractors or sublicensees or its or their respective directors, officers, employees, representatives or agents) in the course of performing activities under this Agreement, whether or not patentable (collectively, "**Joint Inventions**"), and any and all Patent Rights arising therefrom (collectively, such Patent Rights with respect to Joint Inventions, "**Joint Patents**"), and Know-How that is conceived, discovered or otherwise made in the course of performing activities under this Agreement by or on behalf of either or both Parties (or their respective Affiliates, subcontractors or sublicensees or its or their respective directors, officers, employees, representatives or agents) in the course of performing activities under this Agreement

(collectively "**Joint Know-How**"), and other intellectual property rights thereto, in each case to the extent such Joint Inventions, Joint Patents or Joint Know How is not disclosed in a Company Patent or a Novartis Patent. Each Party shall have full rights to license, assign and exploit such Joint Inventions (and any Joint Patents arising therefrom) anywhere in the world, without any requirement of gaining the consent of, or accounting to, the other Party, subject to the licenses granted herein and subject to Section 7.3 (No Implied Licenses). Inventorship shall be determined in accordance with United States federal patent law. For the purpose of clarification, ownership of Regulatory Filings and Regulatory Approvals shall be governed by Section 4.2.

9.4 Filing, Prosecution, Maintenance and Defense of Company Patents.

(a) Company shall have the initial right and responsibility for filing, prosecuting, maintaining, enforcing, and defending any patent applications or patents related to Company Patents at its sole cost and with commercially reasonable diligence. Company shall provide Novartis with timely copies of all material communications to and from the applicable patent offices concerning prosecution of Company Patents, provide Novartis has the opportunity, reasonably in advance of any filing deadlines, to comment thereon and consult with Company about, and consider in good faith the requests and suggestions of Novartis concerning, such prosecution.

(b) At least **[*]** prior to the applicable date for national stage filing of any international patent application filed under the Patent Cooperation Treaty that would be a Company Patent, Company shall provide Novartis with a list of countries and regions into which Company intends to file such national stage applications. This list shall include at a minimum the **[*]** (each of which may be filed either directly or through such international patent application). Novartis may request that Company file such national stage applications in one or more additional countries. Except as provided herein, Company shall retain the sole right and responsibility for prosecuting, maintaining and defending the patent applications and patents related to Company Patents.

(c) If either Party learns of any actual or suspected commercially material infringement by a Third Party of a patent related to Company Patents , it shall promptly notify the other Party, and representatives of Novartis and Company shall confer to determine in good faith an appropriate course of action to enforce or defend such intellectual property rights in accordance with Section 9.7, provided that Company shall initially be the Controlling Party of any such action.

(d) Upon notice that a Third Party has commenced any action to oppose, revoke, cancel or invalidate a patent related to Company Patents, Novartis and Company shall confer to determine in good faith an appropriate course of action to enforce or defend such intellectual property rights in accordance with Section 9.7, provided that Company shall initially be the Controlling Party of any such action.

(e) In the event that Company decides with respect to any country not to file or prosecute, or to abandon or let lapse, any patent application or patent related to Company Patents during the Term, Company shall notify Novartis of such decision at least **[*]** prior to the expiration of any deadline relating to such activities. Novartis shall have the option, but not the obligation, to assume responsibility in writing within **[*]** of such notice for prosecuting, maintaining, and defending such patent application or patent, at Novartis' sole expense. Failure to provide such written notice shall be considered a decision by the other Party that it will not exercise such option, and such option shall immediately terminate. Assuming Novartis exercises its option, Novartis shall keep Company informed of material communications to and from the applicable patent offices concerning prosecution of such patent application or patent.

9.5 Filing, Prosecution, Maintenance and Defense of Novartis Patents.

(a) Novartis shall have the initial right and responsibility for filing, prosecuting, maintaining, enforcing, and defending any patent applications or patents related to the Novartis Patents at its sole cost and with commercially reasonable diligence. Novartis shall provide Company with timely copies of all material communications to and from the applicable patent offices concerning prosecution of the Novartis Patents, provide Company the opportunity, reasonably in advance of any filing deadlines, to comment thereon and consult with Novartis about, and consider in good faith the requests and suggestions of Company concerning, such prosecution.

(b) At least **[*]** prior to the applicable date for national stage filing of any international patent application filed under the Patent Cooperation Treaty that would be a Novartis Patent, Novartis shall provide Company with a list of countries and regions into which Novartis intends to file such national stage applications. This list shall include at a minimum **[*]** (each of which may be filed either directly or through such international patent application). Company may request that Novartis file such national stage applications in one or more additional countries. Except as provided herein, Novartis shall retain the sole right and responsibility for prosecuting, maintaining and defending the patent applications and patents related to the Novartis Patents.

(c) If either Party learns of any actual or suspected commercially material infringement by a Third Party of a patent related to the Novartis Patents, it shall promptly notify the other Party, and representatives of Company and Novartis shall confer to determine in good faith an appropriate course of action to enforce or defend such intellectual property rights in accordance with Section 9.7, provided that Novartis shall initially be the Controlling Party of any such action.

(d) Upon notice that a Third Party has commenced any action to oppose, revoke, cancel or invalidate a patent related to the Novartis Patents, Company and Novartis shall confer to determine in good faith an appropriate course of action to enforce or defend such intellectual property rights in accordance with Section 9.7, provided that Novartis shall initially be the Controlling Party of any such action.

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

(e) In the event that Novartis decides with respect to any country not to file or prosecute, or to abandon or let lapse, any patent application or patent related to the Novartis Patents during the Term, Novartis shall notify Company of such decision at least **[*]** prior to the expiration of any deadline relating to such activities. Company shall have the option, but not the obligation, to assume responsibility in writing within **[*]** of such notice for prosecuting, maintaining, and defending such patent application or patent, at Company's sole expense. Failure to provide such written notice shall be considered a decision by the other Party that it will not exercise such option, and such option shall immediately terminate. Assuming Company exercises its option, Company shall keep Novartis informed of all material communications to and from the applicable patent offices concerning prosecution of such patent application or patent.

9.6 Filing, Prosecution, Maintenance and Defense of Joint Inventions.

(a) Joint Patents.

(i) [*] shall provide **[*]** (1) a reasonable opportunity to review and comment on such filing, prosecution and maintenance efforts regarding such Joint Patents in the Territory reasonably prior to any submissions with applicable patent authorities, and (2) with a copy of material communications from any patent authority in any jurisdiction in the Territory regarding such Joint Patents, and shall provide drafts of any material filings or material responses to be made to such patent authorities a reasonable amount of time in advance of submitting such filings or responses that **[*]** may have an opportunity to review and comment thereon. Decisions regarding prosecution and maintenance of Joint Patents shall be decided by the Joint Intellectual Property Committee. All costs in the course of performing the filing, prosecution and maintenance activities in the Territory set forth in this Section 9.6(a)(i) shall be equally shared between the Parties.

(ii) If either Party learns of any actual or suspected commercially material infringement by a Third Party of a Joint Patent, it shall promptly notify the other Party, and representatives of Company and Novartis shall confer to determine in good faith an appropriate course of action to enforce or defend such intellectual property rights in accordance with Section 9.7, provided that **[*]**.

(iii) Upon notice that a Third Party has commenced any action to oppose, revoke, cancel or invalidate a Joint Patent, Company and Novartis shall confer to determine in good faith an appropriate course of action to enforce or defend such intellectual property rights in accordance with Section 9.7, including which Party shall be the Controlling Party of any such action. The Out-of-Pocket Costs incurred by the Parties in enforcing or defending any such infringement shall be shared by the Parties in accordance with their respective Commercial Sharing Percentages (based on the territory in which such action is brought).

(b) Cooperation. Each Party shall provide the other Party all reasonable notice, assistance and cooperation in the patent prosecution efforts of the other Party, including, with respect to patent term extensions, supplemental protection certificates, orange book listings and other patent filings and linkages, including providing any necessary powers of attorney and executing any other required documents or instruments for such prosecution.

(c) Patent Term Extensions.

(i) [*] shall be responsible for determining the strategy for applying for the extension of the term of any patents for which it has responsibility to prosecute, maintain and defend under this Article 9, such as under the "U.S. Drug Price Competition and Patent Term Restoration Act of 1984" (hereinafter the "Act"), the Supplementary Certificate of Protection of the Member States of the European Union and other similar measures in any other country. If requested by **[*]** shall apply for and use its reasonable efforts to obtain such an extension or, should the law require **[*]** (or one of its respective Affiliates, subcontractors or sublicensees hereunder) to so apply, **[*]** hereby gives permission to **[*]** to do so (in which case **[*]** agrees to cooperate with **[*]** in the exercise of such authorization and shall execute such documents and take such additional action as **[*]** may reasonably request in connection therewith). Novartis and Company agree to cooperate with one another in obtaining any patent extension hereunder **[*]**.

(ii) [*] shall be responsible for determining the strategy with respect to certifications, notices and patent enforcement procedures regarding patents for which it has responsibility to prosecute, maintain and defend under this Article 9 under the Act and the Biologics Price Competition and Innovation Act of 2009 (hereinafter the "**BPCIA**"). **[*]** shall cooperate, as reasonably requested by **[*]**, in a manner consistent with this Section 9.6. **[*]** hereby authorizes **[*]** to: (A) provide in any BLA or in connection with the BPCIA, a list of patents (that may include **[*]**; (B) except as otherwise provided in this Agreement, exercise any rights exercisable by **[*]** as patent owner under the Act or the BPCIA; and (C) exercise any rights that may be exercisable by **[*]** as reference product sponsor under the BPCIA, including (1) engaging in the patent resolution provisions of the BPCIA with regard to patents for which it has responsibility to prosecute, maintain and defend under this Article 9; and (2) determining which patents will be the subject of immediate patent infringement action under § 351(l)(6) of the BPCIA; provided that with respect to **[*]** exercise of rights under the BPCIA, **[*]** shall consult with a representative of **[*]** designated by **[*]** in writing and qualified to receive confidential information pursuant to § 365(l) of the BPCIA with respect to **[*]** exercise of any rights exercisable as reference product sponsor, including providing such representative with timely copies of material correspondence relating to such matters, providing such representative the opportunity, reasonably in advance of any related **[*]** action, to comment thereon and to consult with and consider in good faith the requests and suggestions of **[*]** with respect to such matters.

(iii) In the event that **[*]** desires to apply for an extension of any patents for which **[*]** has responsibility to prosecute, maintain and defend under this Article 9 under the Act, the Supplementary Certificate of Protection of the Member States of the European Union or any other similar measures in any other country; or utilize any such patent for purposes of engaging in the patent resolution provisions or bringing a patent infringement action under the BPCIA; the Parties shall meet in good faith to discuss strategy for such activity, provided that **[*]** shall not be obligated to agree to the use of any such patent for any such activity.

9.7 Enforcement and Defense of Patent Rights.

(a) A Party asserting its right to enforce or defend any patent under this Agreement (the "**Controlling Party**") shall keep the other Party reasonably informed during the course of any legal action related to such enforcement or defense (an "**Action**"), and shall consult with such other Party before taking any major steps during the conduct of such Action. The other Party shall provide all reasonable cooperation to the Controlling Party in connection with such Action, including being named as a party to such Action if required for standing purposes.

(b) The Controlling Party in an Action shall not take any position with respect to, or compromise or settle, such Action in any way that is reasonably likely to directly and adversely affect the scope, validity or enforceability of any patent without the other Party's prior written consent (not to be unreasonably withheld, conditioned, or delayed).

(c) A Party having the right to be the Controlling Party in an Action shall provide prompt written notice to the other Party (in a sufficiently timely manner that such Action will not be prejudiced) if:

(i) it does not intend to pursue the Action pursuant to this Section 9.7 or take such other action as is required or permitted under the Act or BPCIA to preserve its ability to prosecute a potential Action; or

(ii) it has not commenced such Action within the earlier of: (A) [*] after notice of infringement, or (B) [*] prior to the time limit, if any, set forth under Applicable Law for filing such Action or taking such other action; or

(iii) it has ceased or intends to cease to diligently pursue such Action or such other action.

(d) Upon receipt of such written notice under Section 9.7(c), the other Party shall have the option to become the Controlling Party. The other Party shall respond with written notice within **[*]** indicating if it intends to exercise such option, upon which such other Party shall become the Controlling Party, and may take its own action (at its own expense) to enforce, or take such other action with respect to, such Action, including initiating its own Action or taking over prosecution of any such Action initiated previously. Failure to provide such written notice shall be considered a decision by the other Party that it will not exercise such option, and such option shall immediately terminate.

(e) Any recovery from an Action shall be first used to offset expenses of each Party directly attributable to such Action in proportion to each Party's expenses. Any remaining recovery shall belong to the Controlling Party, provided that any such remaining recovery belonging to Novartis shall be treated as Net Sales and Novartis shall pay Company a royalty thereon in accordance with the royalty rates set forth herein.

(f) If the Manufacture, Development or Commercialization of any Collaboration Product results in a Claim or a threatened Claim by a Third Party against a Party for patent infringement or other violation of its intellectual property rights, the Party first having notice thereof shall promptly notify the other in writing. The notice shall set forth the facts of the Claim in reasonable detail. **[*]** shall have the initial right, but not the obligation, to be the Controlling Party to any such Claim.

9.8 Personnel Obligations. Prior to beginning work under this Agreement relating to any Development, Manufacture, use or Commercialization of an Collaboration Molecule or Collaboration Product, each employee, subcontractor, consultant, representative or agent of Novartis or Company or of either Party's respective Affiliates or sublicensees shall be bound by non-disclosure and invention assignment obligations which are consistent with the obligations of Novartis or Company, as applicable, in this Article 9, to the extent permitted by Applicable Law, including: (a) promptly reporting to Novartis or Company, as applicable, any invention, discovery, process or other intellectual property right; (b) assigning to Novartis or Company, as applicable, all of his, her or its right, title and interest in and to any invention, discovery, process or other intellectual property right; (c) taking actions reasonably necessary to secure patent or other intellectual property protection of such invention, discovery, process or other intellectual property right; (d) performing all acts and signing, executing, acknowledging and delivering any and all documents required for effecting the obligations and purposes of this Agreement; and (e) abiding by the obligations of confidentiality and non-use set forth in Article 12. It is understood and agreed that such non-disclosure and invention assignment agreement need not reference or be specific to this Agreement.

9.9 Trademarks.

(a) Corporate Trademarks and Logos. Each Party and its Affiliates shall retain all right, title and interest in and to its and their respective corporate trademarks, house marks, corporate names or logos. Neither Party shall, without the other Party's prior written consent, use any such trademarks, house marks, corporate names or logos of the other Party, or marks confusingly similar thereto, in connection with such Party's Commercialization of Collaboration Products under this Agreement; provided that with regard to each Collaboration Product, to the extent legally permissible, Company will include Novartis' logo and relevant trademarks on all packaging for and materials regarding such Collaboration Product in the U.S.

(b) Marks. Company, after reasonable consultation with Novartis, shall be responsible for the selection of all trademarks (the "**Marks**") for use in connection with the sale or marketing of such Collaboration Product in the Territory in the Field (provided that unless the Parties mutually agree otherwise, no such Mark shall contain the name of the Novartis or another trademark owned or Controlled by Novartis). Company shall be responsible for the registration, maintenance and defense of such Marks and shall own such Marks. The Trademark Costs incurred in connection therewith for Marks applicable to Collaboration

Products in the Territory shall be determined by the JCC and all Trademark Costs shall be shared equally. All uses of the Marks in the U.S. shall comply with Applicable Law (including those laws and regulations particularly applying to the proper use and designation of trademarks).

Article 10
REPRESENTATIONS AND WARRANTIES

10.1 Mutual Representations and Warranties. Each Party hereby represents and warrants to the other Party as of the Execution Date as follows:

(a) Corporate Existence and Power. It is a corporation duly organized, validly existing, and in good standing under the laws of the jurisdiction in which it is incorporated, and has full corporate power and authority and the legal right to own and operate its property and assets and to carry on its business as it is now being conducted and as contemplated by this Agreement, including the right to grant the licenses granted by it hereunder.

(b) Authority and Binding Agreement. (i) It has the corporate power and authority and the legal right to enter into this Agreement and perform its obligations hereunder; (ii) it has taken all necessary corporate action on its part required to authorize the execution and delivery of this Agreement and the performance of its obligations hereunder; and (iii) this Agreement has been duly executed and delivered on behalf of such Party, and constitutes a legal, valid, and binding obligation of such Party that is enforceable against it in accordance with its terms, subject to the application of principles of equity, the availability of the remedy specific performance, and to applicable public policy and court discretion.

(c) No Conflict. It is not a party to any agreement or commitment that would prevent it from granting the rights granted or intended to be granted to the other Party under this Agreement or performing its obligations under this Agreement.

(d) No Debarment. Neither such Party nor any Affiliate thereof is debarred, has been convicted, or is subject to debarment or conviction pursuant to § 306 of the FD&C Act.

10.2 Representations, Warranties and Covenants by Company. Except as set forth on Company Disclosure Schedule, Company hereby represents and warrants to Novartis, as of the Execution Date, and with respect to Section 10.2(m)only, covenants during the Term as follows with respect to each of the Collaboration Products and the Collaboration Molecules, as applicable:

(a) Exhibit 1(A) attached hereto sets forth a complete and accurate list of all Company Patents in existence as of the Execution Date, including the owner and/or co-owner(s) thereof;

(b) Exhibit 10.2(b) attached hereto sets forth a complete and accurate list of all license, assignment, distribution or other agreements relating to Company Patents and true, complete, and correct copies of such agreements as amended on or prior to the Execution Date, have been provided to Novartis on or prior to the Execution Date;

(c) Company owns or Controls all of Company Patents and Company Know-How free from Encumbrances and is listed in the records of the appropriate Governmental Authorities as the owner of record or licensee for each registration, grant and application included in Company Patents or Company Know-How;

(d) Company (i) has, with respect to Patent Rights or Know-How owned by it, obtained from all individuals who participated in any respect in the invention or authorship of any Patent Rights or Know-How, effective assignments of all ownership rights of such individuals in such Patent Rights or Know-How and (ii) to its knowledge with respect to Patent Rights or Know-How licensed to it, the licensors under the Existing Third Party Licenses have obtained from all individuals who participated in any respect in the invention or authorship of any Patent Rights or Know-How, effective assignments of all ownership rights of such individuals in such Patent Rights or Know-How, with respect to (i) and (ii) to the extent that any such Patent Rights or Know-How would constitute Company Patents or Company Know-How, as applicable, if Controlled by Company, either pursuant to written agreement or by operation of law;

(e) all of its and its Affiliates' employees, officers, subcontractors and consultants have executed agreements or have existing obligations under Applicable Law requiring assignment to Company or its Affiliates, as applicable, of all inventions made during the course of and as the result of their association with Company and obligating the individual to maintain as confidential Company's Confidential Information as well as confidential information of other parties (including Novartis and its Affiliates) which such individual may receive, to the extent required to support Company's obligations under this Agreement;

(f) to the knowledge of Company, Company has the right to grant to Novartis the rights under Company Patents and Company Know-How that it purports to grant hereunder;

(g) all application, registration, maintenance and renewal fees in respect of Company Patents as of the Execution Date have been, with respect to Company Patents owned by Company and, to Company's knowledge, with respect to Company Patents licensed to Company, paid and all necessary documents and certificates have been filed with the relevant agencies for the purpose of maintaining Company Patents;

(h) to Company's knowledge, the Development, Manufacture, use or Commercialization of the Collaboration Molecules or Collaboration Products do not infringe the Patent Rights or misappropriate the Know-How of any Third Party, nor has Company received any written notice alleging such infringement or misappropriation;

(i) there are no agreements or arrangements to which Company or any of its Affiliates is a party relating to the Collaboration Products, Collaboration Molecules, Company Patents, or Company Know-How that would limit the rights granted to Novartis under this Agreement or that restrict or will result in a restriction on the Parties' ability to Develop, Manufacture, use or Commercialize the Collaboration Molecules and the Collaboration Products in the Field in the Territory;

(j) neither Company nor any of its Affiliates, nor any of its or their respective officers, employees, representatives or agents has made an untrue statement of material fact or fraudulent statement to the FDA or any other Regulatory Authority with respect to the Development of the Collaboration Molecules or the Collaboration Products, failed to disclose a material fact required to be disclosed to the FDA or any other Regulatory Authority with respect to the Development of the Collaboration Molecules or the Collaboration Products, or committed an act, made a statement, or failed to make a statement with respect to the Development of the Collaboration Molecules or the Collaboration Products that could reasonably be expected to provide a basis for the FDA to invoke its policy respecting "Fraud, Untrue Statements of Material Facts, Bribery, and Illegal Gratuities", set forth in 56 Fed. Reg. 46191 (September 10, 1991) and any amendments thereto;

(k) in the course of the Development of Collaboration Products, neither Company nor any of its Affiliates has used prior to the Execution Date any employee, agent or independent contractor who has been debarred or excluded from participation in government healthcare programs by any Regulatory Authority, or, to Company's knowledge, is the subject of debarment or exclusion proceedings by a Regulatory Authority or has been convicted pursuant to § 306 of the FD&C Act; and

(l) The Existing Third Party Licenses are in full force and effect as modified or amended prior to the Execution Date and Company has provided to Novartis accurate copies of all such Existing Third Party Licenses, and any redacted portions thereof are not material to Novartis' decision to enter into or assert its rights and perform its obligation under this Agreement. Neither Company nor, to Company's knowledge, any Third Party licensor is in default with respect to a material obligation under, and neither such party has claimed or, to Company's knowledge, has grounds upon which to claim that the other party is in default with respect to a material obligation under, any Existing Third Party License. Except as identified in Exhibit 1(B), Company does not Control any other Third Party intellectual property necessary for Novartis to practice the licenses and rights granted under this Agreement.

(m) Company shall, during the Term and with respect to each Existing Third Party License (i) maintain in full force and effect such Existing Third Party License; (ii) promptly provide Novartis with a party's notice of any default under such Existing Third Party License; (iii) to the extent within Company's reasonable control, not take any action, fail to take any action or allow any event to occur that would give the respective Existing Third Party licensor the right to terminate such Existing Third Party License, without the written consent of Novartis; (iv) not amend or modify such Existing Third Party License in a manner that will adversely affect Novartis' rights under this Agreement, without Novartis' prior written consent; (v) not exercise any right to itself terminate or waive any material right under, which waiver would adversely affect Novartis' rights under this Agreement, such Existing Third Party License without the prior written consent of Novartis; and (vi) to the extent practicable, notify Novartis prior to any termination of such Existing Third Party License. In addition, Company shall promptly provide Novartis with a copy of any amendments to Existing Third Party Licenses made after the Effective Date. No Third Party has granted Company a license to Patent Rights or Know-How that are not Controlled by Company or its Affiliates but that would, if Controlled by Company or its Affiliates, be within the definition of Company Patent Rights or Company Know-How.

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

10.3 Representations and Warranties by Novartis. Novartis hereby represents and warrants to Company, as of the Execution Date, as follows with respect to each of the Collaboration Products and Collaboration Molecules, as applicable:

(a) Exhibit 1(C) attached hereto sets forth a complete and accurate list of all Novartis Patents in existence as of the Execution Date, including the owner and/or co-owner(s) thereof;

(b) Exhibit 10.3(b) attached hereto sets forth a list of STING agonists included within Novartis Know-How as of the Execution Date;

(c) Exhibit 10.3(c) attached hereto sets forth a complete and accurate list of all license, assignment, distribution or other agreements relating to the Novartis Patents and true, complete, and correct copies of such agreements have been provided to Company on or prior to the Execution Date;

(d) Novartis owns or Controls all of the Novartis Patents and Novartis Know-How free from Encumbrances and is listed in the records of the appropriate Governmental Authorities as the owner of record or licensee for each registration, grant and application included in the Novartis Patents or Novartis Know-How;

(e) to the knowledge of Novartis, Novartis has, with respect to Patent Rights or Know-How owned by it and to its knowledge with respect to Patent Rights or Know-How licensed to it, obtained from all individuals who participated in any respect in the invention or authorship of any Patent Rights or Know-How, effective assignments of all ownership rights of such individuals in such Patent Rights or Know-How to the extent that any such Patent Rights or Know-How would constitute Novartis Patents or Novartis Know-How, as applicable, if Controlled by Novartis, either pursuant to written agreement or by operation of law;

(f) all of its and its Affiliates' employees, officers, subcontractors and consultants have executed agreements or have existing obligations under Applicable Law requiring assignment to Novartis or its Affiliates, as applicable, of all inventions made during the course of and as the result of their association with Novartis and obligating the individual to maintain as confidential Novartis' Confidential Information as well as confidential information of other parties (including Novartis and its Affiliates) which such individual may receive, to the extent required to support Company's obligations under this Agreement;

(g) to the knowledge of Novartis, Novartis has the right to grant to Company the licenses under the Novartis Patents and Novartis Know-How that it purports to grant hereunder;

(h) all application, registration, maintenance and renewal fees in respect of the Novartis Patents as of the Execution Date have been, with respect to Novartis Patents owned by

Novartis and, to Novartis' knowledge, with respect to Novartis Patents licensed to Novartis, paid and all necessary documents and certificates have been filed with the relevant agencies for the purpose of maintaining the Novartis Patents;

(i) to Novartis' knowledge, the Development, Manufacture, use or Commercialization of the Collaboration Molecules or Collaboration Products do not infringe the Patent Rights or misappropriate the Know-How of any Third Party, nor has Novartis received any written notice alleging such infringement or misappropriation;

(j) there are no agreements or arrangements to which Novartis or any of its Affiliates is a party relating to the Collaboration Products, Collaboration Molecules, Novartis Patents, or Novartis Know-How that would limit the rights granted to Company under this Agreement or that restrict or will result in a restriction on the Parties' ability to Develop, Manufacture, use or Commercialize the Collaboration Molecules and the Collaboration Products in the Field in the Territory;

(k) neither Novartis nor any of its Affiliates, nor any of its or their respective officers, employees, representatives or agents has made an untrue statement of material fact or fraudulent statement to the FDA or any other Regulatory Authority with respect to the Development of the Collaboration Molecules or the Collaboration Products, failed to disclose a material fact required to be disclosed to the FDA or any other Regulatory Authority with respect to the Development of the Collaboration Molecules or the Collaboration Products, or committed an act, made a statement, or failed to make a statement with respect to the Development of the Collaboration Molecules or the Collaboration Products that could reasonably be expected to provide a basis for the FDA to invoke its policy respecting "Fraud, Untrue Statements of Material Facts, Bribery, and Illegal Gratuities", set forth in 56 Fed. Reg. 46191 (September 10, 1991) and any amendments thereto;

(l) in the course of the Development of Collaboration Products, neither Novartis nor any of its Affiliates has used prior to the Effective Date any employee, agent or independent contractor who has been debarred by any Regulatory Authority, or, to Novartis' knowledge, is the subject of debarment proceedings by a Regulatory Authority or has been convicted pursuant to § 306 of the FD&C Act; and

(m) Novartis does not Control any other Third Party intellectual property necessary for Company to practice the licenses and rights granted under this Agreement; and no Third Party has granted Novartis a license to Patent Rights or Know-How that are not Controlled by Novartis or its Affiliates but that would, if Controlled by Novartis or its Affiliates, be within the definition of Novartis Technology.

10.4 Restrictions on Technology.

(a) No Transfer of Title. Company covenants and agrees that from the Execution Date until the expiration of the Term, neither it nor its Affiliates shall enter into any agreement with any Third Party, whether written or oral, with respect to, or otherwise assign, transfer, license, convey its right, title or interest in or to or grant any other Encumbrance to or

under, Company Technology or any Collaboration Product in each case, that would prevent it from granting the rights to Novartis by Company under this Agreement or that would restrict either Party's ability to Develop, Manufacture, use or Commercialize such Molecules and such Collaboration Products in the Field in the Territory in accordance with this Agreement.

(b) Existing Third Party Agreements. During the Term, Company and its Affiliates and Novartis and its Affiliates shall not take any action, or omit to take any action, that would result in a material breach or early termination of any Existing Third Party License or any material rights thereunder. Each Party shall promptly notify the other Party after its receipt of any notice of any actual or alleged breach under any Existing Third Party License that could result in the termination of such agreement(s) or any material reduction or other material limitation in any rights thereunder. The non-breaching Party shall be entitled to cure any such breach and set off any Losses incurred in doing so against any payment due under this Agreement.

10.5 No Other Representations or Warranties. EXCEPT AS EXPRESSLY STATED IN THIS AGREEMENT, NO REPRESENTATIONS OR WARRANTIES WHATSOEVER, WHETHER EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT IS MADE OR GIVEN BY OR ON BEHALF OF A PARTY. EXCEPT AS EXPRESSLY STATED IN THIS AGREEMENT, ALL REPRESENTATIONS AND WARRANTIES, WHETHER ARISING BY OPERATION OF LAW OR OTHERWISE, ARE HEREBY EXPRESSLY EXCLUDED.

Article 11
INDEMNIFICATION

11.1 Indemnification by Company. Subject to the other provisions of this Article 11, Company shall defend Novartis, its Affiliates and its sublicensees and each of their respective officers, directors, agents, representatives and employees (collectively, **"Novartis Indemnitees"**) from and against all charges, allegations, notices, civil, criminal or administrative claims, demands, complaints, causes of action, proceedings or investigations of a Third Party (collectively, **"Claims"**), and indemnify and hold harmless such Novartis Indemnitees from and against any and all losses, liabilities, obligations, awards, settlements, penalties, fines, sanctions, damages and reasonable costs (including awards of court costs and reasonable attorneys' fees) (collectively, **"Losses**") that result from any such Claims, where and to the extent that such Claims are made or brought against any Novartis Indemnitee by or on behalf of a Third Party, and solely to the extent such Claim is based on or arises out of:

(a) the negligent, reckless or willful actions or omissions of Company or its Affiliates in performing Company's obligations under this Agreement or any other agreement entered into in connection with this Agreement;

(b) the breach of any obligation, covenant, warranty or representation made by Company under this Agreement or any other agreement entered into in connection with this Agreement;

(c) the Development, Manufacture or use of any Collaboration Molecule or Collaboration Product by or on behalf of Company and/or its Affiliates or licensees prior to the Effective Date;

(d) any misappropriation of trade secrets, proprietary materials, and/or patentable subject matter, in each case owned or controlled by a Third Party in relation to the Development or Manufacture of a Collaboration Product, Collaboration Molecule or Company's STING technology at any time prior to the Effective Date, whether by or on behalf of Company or its Affiliates, or from which Company or its Affiliates benefited;

(e) with respect to any Patent Rights or Know-How licensed under any Existing Third Party License, the failure to obtain effective assignments of all ownership rights in such Patent Rights or Know-How to the respective Existing Third Party Licensor;

(f) any violation of Applicable Law by Company, its Affiliates or licensees in the course of its activities under this Agreement; or

(g) Company's breach of any Existing Third Party License, whether prior to or after the Effective Date;

provided, however, except in each case to the extent that such Claim or Loss is attributable to any matter for which Novartis is obligated to indemnify an Company Indemnitee pursuant to Section 11.2 below.

11.2 Indemnification by Novartis. Subject to the other provisions of this Article 11, Novartis shall defend Company, its Affiliates and its sublicensees and each of their respective officers, directors, agents, representatives and employees (collectively, **"Company Indemnitees"**), from and against all Claims, and indemnify and hold harmless such Company Indemnitees from and against any and all Losses that result from such Claims, where and to the extent that such Claims are made or brought against any Company Indemnitee by or on behalf of a Third Party, and solely to the extent such Claim is based on or arises out of:

(a) the negligent, reckless or willful actions or omissions of Novartis or its Affiliates in performing Novartis' obligations under this Agreement or any other agreement entered into in connection with this Agreement;

(b) the breach of any obligation, covenant, warranty or representation made by Novartis under this Agreement or any other agreement entered into in connection with this Agreement;

(c) the Development, Manufacture or use of any Collaboration Molecule or Collaboration Product by or on behalf of Novartis and/or its Affiliates or licensees prior to the Effective Date;

(d) misappropriation of trade secrets, proprietary materials, and/or patentable subject matter, in each case owned or controlled by a Third Party in relation to the Development or Manufacture of a Collaboration Product or Collaboration Molecule at any time prior to the Effective Date, whether by or on behalf of Novartis or its Affiliates, or from which Novartis or its Affiliates benefited; or

(e) any violation of Applicable Law by Novartis, its Affiliates or licensees in the course of its activities under this Agreement;

provided, however, except in each case to the extent that such Claim or Loss is attributable to any matter for which Company is obligated to indemnify Novartis Indemnitee pursuant to Section 11.1 above.

11.3 Indemnification Procedures. A Person entitled to indemnification pursuant to either Section 11.1 or Section 11.2 will hereinafter be referred to as an **"Indemnitee."** A Party obligated to indemnify an Indemnitee hereunder will hereinafter be referred to as an **"Indemnitor."** In the event any Novartis Indemnitee or Company Indemnitee is seeking indemnification under either Section 11.1 or Section 11.2, Novartis or Company, as applicable, will inform the applicable Indemnitor of a Claim as soon as reasonably practicable, but in no event more than [*], after it receives notice of the Claim, it being understood and agreed that the failure to give notice of a Claim as provided in this Section 11.3 will not relieve the Indemnitor of its indemnification obligation under this Agreement except and only to the extent that such Indemnitor is actually and materially prejudiced as a result of such failure to give notice. The Indemnitee will permit the Indemnitor to assume direction and control of the defense of such Claim using counsel selected by the Indemnitor and reasonably acceptable to the Indemnitee, and, at the Indemnitor's expense, will cooperate, and cause its Affiliates and agents to cooperate, as reasonably requested in the defense of such Claim. The Indemnitee will have the right to retain its own counsel at its own expense; provided that if the Indemnitor assumes control of such defense and the Indemnitee reasonably concludes, based on advice from counsel, that the Indemnitor and the Indemnitee may have conflicting interests with respect to such Claim, the Indemnitor will be responsible for the cost of one counsel for the Indemnitee (and all other Indemnitees in connection with the same Claim or multiple Claims arising out of the same events or circumstances). The Indemnitor may not settle such Claim, or otherwise consent to an adverse judgment in such Claim without the Indemnitee's prior written consent, not to be unreasonably withheld or delayed; provided that the Indemnitor shall not be required to obtain such consent with respect to the settlement of any Claim under which the sole relief provided is for monetary damages that are paid in full by the Indemnitor, which would not diminish or limit or otherwise adversely affect the rights, activities or financial interests of the Indemnitee, and which does not result in any finding or admission of fault by the Indemnitee. Each of the Indemnitee and the Indemnitor shall not make any admission of liability in respect of any Claim without the prior written consent of the other Party, and the Indemnitee shall use reasonable efforts to mitigate Losses arising from such Claim.

11.4 Defense of and Indemnification for Product Liability Claims. Except for Claims covered by Section 11.1 or 11.2, with respect to any Shared Product Liability Claim during the Term, the Parties agree that:

(a) Each of Company and Novartis shall indemnify and hold harmless the Novartis Indemnitees or Company Indemnitees, as applicable, from and against its respective Commercial Sharing Percentage (based on the territory in which such Shared Product Liability Claim is brought) of all Losses incurred by such Novartis Indemnitees or Company Indemnitees, as applicable, based on or arising out of any Shared Product Liability Claim made or brought against any Novartis Indemnitees or Company Indemnitees, as applicable, by or on behalf of a Third Party (**"Product Liability Share**").

(b) If either Party becomes aware of any Shared Product Liability Claim, it shall inform the other Party as soon as reasonably practicable, but in no event more than [*], after it receives notice of such Shared Product Liability Claim, it being understood and agreed that the failure by either Party to give notice of a Shared Product Liability Claim will not relieve the other Party of its obligations under this Agreement except and only to the extent that such the other Party is actually and materially prejudiced as a result of such failure to give notice.

(c) Novartis shall assume direction and control of the defense of any Shared Product Liability Claim, and Company will cooperate as reasonably requested in the defense of such Shared Product Liability Claim; provided that Novartis shall (i) use counsel reasonably acceptable to Company; and provided further that, if Company reasonably concludes, based on advice from counsel, that Company and Novartis have conflicting interests with respect to such Shared Product Liability Claim, Company shall have the right to obtain counsel of its own at its own cost, (ii) keep Company reasonably informed as to the status of such defense, and (iii) consult with Company in good faith with regard to all material litigation strategy decisions in connection with such defense, including, if applicable, joining Company as a co-party. Novartis shall provide Company an invoice for Company's Product Liability Share of the costs of such defense each Calendar Quarter during the Term, and unless otherwise disputed by Company in good faith in accordance with Section 15.2, Company shall pay the amount set forth in such invoice to Novartis within [*] after receipt.

(d) Novartis may not settle or compromise any Shared Product Liability Claim without obtaining the consent of Company, such consent not to be unreasonably withheld or delayed.

(e) Each Calendar Quarter during the Term, each Party shall provide the other Party with a full accounting of all Losses incurred (if any) in connection with any Shared Product Liability Claim for which each Party is obligated to indemnify the other pursuant to subsection (a) above, together with an invoice for [*] of such Losses pursuant to Section 8.6. Unless otherwise disputed by the other Party in good faith, such other Party shall pay the amount set forth in the invoice within [*] after receipt of such invoice.

(f) Novartis shall indemnify and hold harmless Company Indemnitees from and against any and all Losses incurred by such Company Indemnitees based on or arising out of any Novartis Product Liability Claim made or brought against any Company Indemnitees by or on behalf of a Third Party.

11.5 Limitation of Liability. NEITHER PARTY NOR ANY OF ITS AFFILIATES SHALL BE LIABLE IN LAW, EQUITY, CONTRACT, TORT, NEGLIGENCE, BREACH OF STATUTORY DUTY OR OTHERWISE FOR ANY SPECIAL, INDIRECT, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES OR LOSS OF PROFITS OR OPPORTUNITIES OR DIMINUTION OF GOODWILL SUFFERED BY THE OTHER PARTY OR ANY OF ITS AFFILIATES, EXCEPT TO THE EXTENT ANY SUCH DAMAGES ARE REQUIRED TO BE PAID TO A THIRD PARTY AS A RESULT OF A CLAIM FOR WHICH A PARTY PROVIDES INDEMNIFICATION UNDER THIS ARTICLE 11. NOTWITHSTANDING ANYTHING EXPRESS OR IMPLIED IN THIS SECTION 11.5, A PARTY OR ITS AFFILIATE, AS APPLICABLE, SHALL BE ENTITLED TO RECOVER ALL AMOUNTS ACCRUED AND OWING UNDER THIS AGREEMENT.

11.6 Insurance. Each Party shall procure and maintain insurance (which may take the form of self insurance), including product liability insurance, with respect to its activities hereunder and which are consistent with normal business practices of prudent companies similarly situated at all times during which any Collaboration Product is being clinically tested in human subjects or commercially distributed or sold. It is understood that such insurance shall not be construed to create a limit of either Party's liability with respect to its indemnification obligations under this Article 11. Each Party shall provide the other Party with written evidence of such insurance upon request. Each Party shall provide the other Party with written notice at least **[*]** days prior to the cancellation, non-renewal or material change in such insurance or self-insurance which materially adversely affects the rights of the other Party hereunder.

Article 12
CONFIDENTIALITY

12.1 Duty of Confidence.

(a) Subject to the other provisions of this Article 12, all Confidential Information disclosed by a Party ("**Disclosing Party**") or its Affiliates under this Agreement will be maintained in confidence and otherwise safeguarded by the other Party ("**Recipient Party**"). The Recipient Party may only use the Confidential Information for the purposes of this Agreement and pursuant to the rights granted to the Recipient Party under this Agreement. Subject to the other provisions of this Article 12, each Party shall hold as confidential such Confidential Information of the other Party or its Affiliates in the same manner and with the same protection as such Recipient Party maintains its own confidential information. Subject to

the other provisions of this Article 12, a Recipient Party may only disclose Confidential Information of the other Party to employees, representatives, agents, sublicensees, subcontractors, consultants and advisers of the Recipient Party and its Affiliates to the extent reasonably necessary for the purposes of, and for those matters undertaken pursuant to, this Agreement; provided that such Persons are bound to maintain the confidentiality of the Confidential Information in a manner consistent with the confidentiality provisions of this Agreement.

(b) Subject to the other provisions of this Article 12, the existence of this Agreement and the terms and conditions of this Agreement shall be considered Confidential Information of both Parties and each Party shall maintain in confidence and otherwise safeguard such terms and conditions as such in accordance with this Article 12.

12.2 Exceptions. The obligations under this Article 12 shall not apply to any information to the extent the Recipient Party can demonstrate by competent evidence that such information:

(a) is (at the time of disclosure) or becomes (after the time of disclosure) known to the public or part of the public domain through no breach of this Agreement by the Recipient Party or its Affiliates;

(b) was known to, or was otherwise in the possession of, the Recipient Party or its Affiliates prior to the time of disclosure by the Disclosing Party or any of its Affiliates;

(c) is disclosed to the Recipient Party or an Affiliate on a non-confidential basis by a Third Party who is entitled to disclose it without breaching any confidentiality obligation to the Disclosing Party or any of its Affiliates; or

(d) is independently developed by or on behalf of the Recipient Party or its Affiliates, as evidenced by its written records, without reference to the Confidential Information disclosed by the Disclosing Party or its Affiliates under this Agreement.

Specific aspects or details of Confidential Information shall not be deemed to be within the public domain or in the possession of the Recipient Party merely because the Confidential Information is embraced by more general information in the public domain or in the possession of the Recipient Party. Further, any combination of Confidential Information shall not be considered in the public domain or in the possession of the Recipient Party merely because individual elements of such Confidential Information are in the public domain or in the possession of the Recipient Party unless the combination and its principles are in the public domain or in the possession of the Recipient Party.

12.3 Authorized Disclosure.

(a) In addition to disclosures allowed under Section 12.2, each Party may disclose Confidential Information belonging to the other Party or its Affiliates solely to the extent such disclosure is necessary in the following instances: (i) filing or prosecuting Patent

Rights as permitted by this Agreement; (ii) in connection with Regulatory Filings for Products; (iii) prosecuting or defending litigation as permitted by this Agreement; (iv) complying with Applicable Law, court orders or governmental regulations, including rules of self-regulatory organizations and SEC filing and disclosure requirements; (v) Company's disclosure of Confidential Information under this Agreement (including Novartis' Confidential Information) to any Existing Third Party Licensor to the limited extent required by an Existing Third Party License; (vi) to the extent such disclosure is reasonably necessary and with prior notice if possible under the circumstances: (A) to comply with the terms of agreements with Third Parties related to a Collaboration Product that exist as of the Effective Date; (B) to comply with the terms of agreements with Third Parties related to a Collaboration Product that are entered into after the Effective Date, provided that such agreements are entered into in compliance with the terms of this Agreement and, further provided that the provisions of such agreements requiring disclosure of the other Party's Confidential Information have been reviewed and approved by such other Party (such approval not to be unreasonably withheld); or (vii) to potential or actual investors or acquirers as may be necessary in connection with their evaluation of a potential or actual investment or acquisition; provided that such persons shall be subject to obligations of confidentiality and non-use at least as protective as those set forth in this Article 12; and (viii) to the extent otherwise necessary or appropriate in connection with its rights and performing its obligations hereunder.

(b) In the event the Recipient Party is required to disclose Confidential Information of the Disclosing Party by law, applicable court order or governmental regulation or in connection with bona fide legal process, such disclosure shall not be a breach of this Agreement; provided that the Recipient Party (i) informs the Disclosing Party as soon as reasonably practicable of the required disclosure; (ii) limits the disclosure to that which is legally required to be disclosed; and (iii) at the Disclosing Party's request and expense, assists in an attempt to object to or limit the required disclosure.

(c) Either Party may disclose the existence and terms of this Agreement in confidence to its attorneys and advisors, and to potential acquirers (and their respective professional attorneys and advisors), in connection with a potential merger, acquisition or reorganization and to existing and potential investors or lenders of such Party, as part of their due diligence investigations, or to existing and potential licensees or sublicensees or to permitted assignees, in each case under an agreement to keep the terms of confidentiality and non-use substantially no less rigorous than the terms contained in this Agreement and to use such information solely for the purpose permitted pursuant to this Section 12.3(c).

12.4 Public Disclosures of Data.

(a) Neither Party nor any of its Affiliates shall, except as may be required by Applicable Law in the reasonable judgment of such Party or its Affiliates and its or their counsel, publicly disclose data or results of Clinical Studies or Nonclinical Studies that have not already been publicly disclosed with respect to any Collaboration Molecule or Collaboration Product (whether conducted prior to or during the Term), except as provided in this Section 12.4.

(b) Scientific and Medical Conferences. All presentations of data and results of Clinical Studies or Nonclinical Studies relating to or arising out of Development activities hereunder at scientific and medical conferences shall be by mutual written agreement of the Parties.

(c) Publications. Publications of data and results of Clinical Studies or Nonclinical Studies relating to or arising out of Development activities hereunder in peer-reviewed journals ("**Publications**") shall be made only pursuant to this Section 12.4(c). The Party proposing a Publication shall provide the other Party with the opportunity to review the proposed Publication at least [*] Business Days prior to its intended submission for publication. If the other Party offers no comments on the Publication, the submitting Party may submit the Publication [*] Business Days after it provided the Publication to the reviewing Party (or earlier, with the written consent of the reviewing Party). The submitting Party shall consider the comments of the reviewing Party in good faith. If the Parties are unable to agree upon any aspect of the Publication, including its form, content, timing (including with respect to additional time required for seeking patent protection for inventions disclosed in the Publication), or proposed medium of publication, either Party may refer the dispute to the JSC, which shall resolve the dispute in the best interests of the Development and Commercialization of the Collaboration Molecules and the Collaboration Products and in a manner designed to the extent possible to enable each Party to comply with its publication policies. The submitting Party shall provide the other Party a copy of the Publication at the time of the submission. Notwithstanding the foregoing, the JSC shall not have the right to authorize the publication of either Party's Confidential Information without such Party's consent, except that this restriction shall not restrict the JSC from authorizing any publication of any Clinical Study results. Each Party agrees to acknowledge the contributions of the other Party, and the employees of the other Party, in all publications as scientifically appropriate.

12.5 Publicity.

(a) A press release relating to this Agreement will be mutually agreed upon by the Parties and shall be released on the Effective Date, unless otherwise agreed by the Parties. Neither Party shall issue any other press release or make any other public announcement concerning this Agreement, the terms hereof or the Collaboration without the prior written consent of the other Party, which consent shall not be unreasonably withheld or delayed; provided that, in the event that any Party fails to provide such prior written consent, the Party wishing to issue such press release or public announcement may refer such dispute to the JSC for resolution in accordance with Section 2.5. The Party preparing any such other press release or public announcement shall, if reasonably practicable, provide the other Party with a draft thereof at least **[*]** Business Days prior to the date on which such Party would like to issue the press release or make the public announcement; provided, however, that a Party may issue such press release or public announcement without such prior review and consent by the other Party if (i) the contents of such press release or public announcement have previously been made public other than through a breach of this Agreement by the issuing Party and (ii) such press release or public announcement does not materially differ from the previously issued press release or other publicly available information. Notwithstanding the foregoing, under no circumstance may

either Party use the name, trademark, trade name, logo or image of the other Party or its Affiliates in any publicity, press release or other public announcement, including on any website or public forum, without the prior written consent of the other Party. In addition, if a Party enters into a sublicense or other agreement with any sublicensee, subcontractor or other Third Party, such Party shall not permit such sublicensee, subcontractor or other Third Party to use the name, trademark, trade name, logo or image of the other Party or its Affiliates in any publicity, press release or other public announcement, including on any website or public forum, without the prior written consent of the other Party.

(b) Notwithstanding the other provisions of this Article 12, each Party may make any disclosures required of it, including disclosure of the terms of this Agreement, to comply with any duty of disclosure it may have pursuant to Applicable Law or pursuant to the rules of any Governmental Authority (including the SEC) or any recognized stock exchange. In the event of a disclosure required by Applicable Law, Governmental Authority or the rules of any recognized stock exchange, the Parties shall coordinate with each other with respect to the timing, form and content of such required disclosure. If the Parties are unable to agree on the timing, form or content of any required disclosure, such disclosure shall be limited to the minimum required as reasonably determined by the Party subject to the disclosure requirement, in consultation with its legal counsel. Notwithstanding the foregoing, if so requested by the other Party, the Party subject to such requirement shall use Commercially Reasonable Efforts to obtain an order protecting to the maximum extent possible the confidentiality of the required disclosures, or such portion thereof as reasonably requested by the other Party, including any provisions of this Agreement requested by the other Party to be redacted from any filing with or by the SEC or other Governmental Authority or recognized stock exchange.

12.6 Return of Confidential Information. Upon the expiration or termination of this Agreement, the Recipient Party shall return to the Disclosing Party or destroy all Confidential Information received by the Recipient Party from the Disclosing Party, except for one copy which may be retained in its confidential files for archive purposes. Notwithstanding the return or destruction of the Disclosing Party's Confidential Information, the Recipient Party shall continue to be bound by its obligations of confidentiality and other obligations under this Article 12.

Article 13
TERM AND TERMINATION

13.1 Term. The term of this Agreement (the "**Term**") shall become effective on the Effective Date and shall remain in effect, subject to earlier termination under Section 13.2, until the date that is the later of (a) the expiration of the Royalty Term throughout the Fixed Royalty Territory for all Collaboration Products, and (b) the date on which the Parties mutually agree to cease the promotion and sale of all Collaboration Products throughout the Profit Share Territories (if the Fixed Royalty Territory does not comprise the entire Territory).

13.2 Termination by Either Party for Breach or Insolvency.

(a) Breach. Either Party (the "**Non-Breaching Party**") may, without prejudice to any other remedies available to it under Applicable Law or in equity, terminate this Agreement, in its entirety or with respect to one or more of any of the Collaboration Products in one or more of the countries in the Territory, if the other Party (the "Breaching Party") shall have materially breached (1) a representation or warranty made by such Party under this Agreement or (2) its obligations under this Agreement, and in the case of clause (2) such breach shall have continued for [*] (or, in the case of a payment breach, [*]) after written notice thereof was provided to the Breaching Party by the Non-Breaching Party describing the alleged breach. Subject to Section 13.2(b), any such termination of this Agreement under this Section 13.2(a) shall become effective at the end of such [*] cure period, unless:

(i) the Breaching Party has cured such breach prior to the expiration of such cure period; or

(ii) such breach is not susceptible to cure within such cure period even with the use of Commercially Reasonable Efforts, in which event the Non-Breaching Party's right to termination shall be suspended only if and for so long as (A) the Breaching Party has provided to the Non-Breaching Party a written plan that is reasonably calculated to effect a cure of the applicable breach, (B) such plan is acceptable to the Non-Breaching Party in its sole discretion as confirmed in writing, and (C) the Breaching Party commits to and does carry out such plan; provided that, unless otherwise mutually agreed by the Parties, in no event shall such suspension of the Non-Breaching Party's right to terminate extend beyond **[*]** after the original cure period.

(b) Disagreement. If the Parties reasonably and in good faith disagree as to whether there has been a material breach, the Party that seeks to dispute that there has been a material breach may contest the allegation in accordance with Section 15.2. The cure period for any allegation made in good faith as to a material breach under this Agreement will, subject to Section 15.2, run from the date that written notice was first provided to the Breaching Party by the Non-Breaching Party; provided that such cure period shall be stayed in the event that during such cure period, the alleged Breaching Party shall have initiated dispute resolution in good faith in accordance with Section 15.2 with respect to the alleged breach, which stay shall last so long as such alleged Breaching Party diligently and in good faith cooperates in the prompt resolution of such dispute resolution proceedings.

(c) Insolvency. Either Company or Novartis may terminate this Agreement in its entirety immediately upon written notice to the other Party if an Insolvency Event occurs in relation to the other Party. In any event, when a Party first becomes aware of the likely occurrence of any Insolvency Event in regard to that Party, such Party shall promptly so notify the other Party in sufficient time to give the other Party sufficient notice to protect such other Party's interests under this Agreement.

13.3 Termination by Either Party for Safety Reasons. Either Party shall have the right, exercisable at any time to terminate this Agreement with respect to a Collaboration Product, either in whole or for a specific indication for such Collaboration Product, if it in good faith believes that it is not advisable for the Parties to continue to Develop or Commercialize such Collaboration Product (either in whole or for such indication) from a scientific, regulatory or ethical perspective as a result of a bona fide serious safety issue regarding the use of such Collaboration Product on its own or in such indication; provided that prior to exercising such termination right, such issue and the applicable Party's desire to terminate this Agreement with respect to such Collaboration Product (either in whole or for such indication) as a result of such issue shall have been deliberated with due care by both the JRDC and JSC.

13.4 Termination by Novartis for Convenience. At any time after the third (3rd) anniversary of the Effective Date, Novartis shall have the right, exercisable at any time to terminate this Agreement in its entirety for convenience, on one hundred eighty (180) days' notice to Company.

13.5 Effects of Expiration or Termination.

(a) Accrued Obligations; Termination Not Sole Remedy. Except as otherwise expressly provided herein, the expiration or termination of this Agreement for any reason shall not release either Party from any liability or obligation that, at the time of such expiration or termination, has already accrued to the other Party or that is attributable to a period prior to such expiration or termination, nor will any termination of this Agreement preclude either Party from pursuing all rights and remedies it may have under this Agreement, or at law or in equity, with respect to breach of this Agreement prior to such expiration or termination.

(b) Effects of Expiration or Termination.

(i) Upon the earlier termination of this Agreement in its entirety or with respect to one or more Collaboration Products pursuant to Section 13.2 in one or more of the countries in the Territory, or upon the earlier termination of this Agreement with respect to one or more Collaboration Products pursuant to Section 13.3 or Section 13.4 throughout the Territory, then with respect to such Collaboration Products and countries, as applicable:

(A) Each license under Section 7.1 and for such Collaboration Product(s) in such country(ies) shall terminate;

(B) Novartis shall cease its Commercialization activities and any Development activities related to such Collaboration Product(s) in such country(ies); and

(C) No Milestone achieved with respect to such Collaboration Product(s) after the effective date of termination for the applicable Collaboration Product shall give rise to any Milestone Payments by Novartis.

(ii) Following expiration of the Royalty Term throughout the Fixed Royalty Territory for all Collaboration Products and mutual agreement of the Parties to cease the

promotion and sale of all Collaboration Products throughout the Profit Share Territories (if the Fixed Royalty Territory does not comprise the entire Territory), the licenses granted to Novartis under this Agreement with respect to such Collaboration Product throughout the Fixed Royalty Territory shall continue as fully paid-up, royalty free licenses, and Novartis, may in its discretion and without accounting or other obligation to Company to continue its Commercialization activities and any Development activities related to the Collaboration Products throughout the Fixed Royalty Territory.

(c) Additional Effects of Termination. In addition to the effects set forth in Section 13.5(b)(i), upon a termination of this Agreement in its entirety by Novartis pursuant to Section 13.4 or Section 14.1(b)(ii), or by a Party pursuant to Section 13.2, the rights and obligations of Company and Novartis shall be as set forth in this Section 13.5(c). For purposes hereof, (i) "**Discontinuing Party**" shall mean, (A) Novartis, in the event of a termination by Novartis pursuant to Section 13.4 or Section 14.1(b)(ii) or by Company pursuant to Section 13.2 and (B) Company, in the event of a termination by Novartis pursuant to Section 13.2, and (ii) "**Continuing Party**" shall mean (A) Company, in the event of a termination by Novartis pursuant to Section 13.4 or Section 14.1(b)(ii) or by Company pursuant to Section 13.2 and (B) Novartis, in the event of a termination by Novartis pursuant to Section 13.2.

(i) Effective upon the date of such termination, the Discontinuing Party hereby grants to the Continuing Party a **[*]** right and license under (i) the Novartis Patents and Novartis Know-How, if Novartis is the Discontinuing Party or (ii) Company Patents and Company Know-How, if Company is the Continuing Party, in each case, to use, have used, Develop, have Developed, Manufacture, have Manufactured, Commercialize, and have Commercialized Collaboration Products in the Field in the Territory; provided that **[*]**. Neither Party will be obligated to enter into any transaction described in this Section 13.5(c)(i), and neither Party will have any liability to the other for failure to do so. The Discontinuing Party hereby acknowledges and agrees that the Continuing Party shall be free to use Joint Know-How, Joint Patents and Joint Inventions without any need for an accounting with respect thereto.

(ii) Prior to the effective date of such termination, the Parties shall negotiate in good faith and agree upon a commercially reasonable transition plan that sets forth a strategy and estimated schedule for the transition of Know-How and Collaboration Products to the Continuing Party in order to seek to minimize any disruption to the Development or Commercialization of the Collaboration Products. The transition plan shall provide that the Parties shall use Commercially Reasonable Efforts for support in Commercialization, Development and regulatory activities, and such other matters as the Parties may agree. The Parties shall cooperate in good faith and provide each other reasonable consultation and assistance to effect a smooth and orderly transition, including with respect to the transfer of responsibility for ongoing Clinical Studies.

(iii) At the Continuing Party's option, which shall be exercised by written notice, to the extent permitted under Applicable Law, the Discontinuing Party shall assign or cause to be assigned to the Continuing Party or its designee, at no cost to the

Continuing Party, any and all Regulatory Filings made with, and all Regulatory Approvals obtained from, Regulatory Authorities in the Territory specifically relating to the Collaboration Products, in all cases, only to the extent such assignment is legally permissible. To the extent such assignment is not legally permissible, the Discontinuing Party shall take all reasonable actions to make available to the Continuing Party or its designee the benefits of such Regulatory Filings and Regulatory Approvals.

(iv) The Discontinuing Party shall promptly provide to the Continuing Party, at no cost to the Continuing Party, all Know-How, materials, and other development data specifically relating to the Collaboration Products; provided that the Discontinuing Party shall be entitled to retain copies of such items for legal archival and regulatory purposes. The Discontinuing Party shall deliver to the Continuing Party (i) all clinical data and information in the Discontinuing Party's possession or control relating solely to Collaboration Products, including for clarity, manufacturing data, if any and (ii) copies of all reports, records, regulatory correspondence and other materials in the Discontinuing Party's possession or control relating solely to the clinical development of Collaboration Products, in each case (i) and (ii) in the same form in which the Discontinuing Party maintains such data, information and other items.

(v) The Discontinuing Party shall grant to the Continuing Party a "Right of Reference," as that term is defined in 21 C.F.R. § 314.3(b) (or any analogous Applicable Law recognized outside of the United States), with respect to Regulatory Filings and development data transferred to the Continuing Party pursuant to Section 13.5(c)(iii) and 13.5(c)(iv) above.

(vi) [*].

(vii) The Discontinuing Party shall have the right to continue to sell its existing inventory of Collaboration Products for a period not to exceed [*] after the effective date of such termination, and the Continuing Party shall continue to receive royalties and gross profit payments with respect to such sales in accordance with the terms hereof.

(viii) The Discontinuing Party shall assign to the Continuing Party all right, title and interest in and to all Marks used exclusively with Collaboration Products.

(ix) If Company is the Discontinuing Party, Novartis shall pay to Company any amounts that Company is obligated to pay to Third Parties ([*]) under the Existing Third Party Licenses as a result of the license granted to Novartis pursuant to Section 13.5(c)(i). In addition, Novartis shall comply with any other obligations in the Third Party Licenses that are applicable to the grant to Novartis of the license pursuant to Section 13.5(c)(i).

(x) If Company is the Continuing Party, the Parties shall negotiate in good faith a supply agreement for the Manufacture and supply of Commercial Products following the effective of such termination, which agreement shall be on commercially reasonable terms and shall provide that, upon Company's request at any time during the term of such agreement, Novartis shall transfer supply to Company or its designee. Such agreement

shall have a term that commences upon the effective date of such termination and continues until the later of (A) the **[*]** anniversary of the effective date of such termination or (B) the completion of the transition of supply to Company or its designee and of the validation any successor supplier, including Company, as required to continue with Development and Commercialization activities in respect of the Collaboration Products.

(d) Except as set forth in this Section 13.5 and Section 13.7, the rights and obligations of the Parties hereunder solely with respect to such Collaboration Product(s) in such country(ies) (and not with respect to any other Collaboration Product(s) or country(ies)) shall terminate as of the date of such termination; provided that other than in the event of the termination of this Agreement in its entirety, the rights and obligations with respect to any remaining Collaboration Products and countries under this Agreement shall continue pursuant to the terms of this Agreement.

13.6 Rights in Bankruptcy.

(a) All licenses, Commercialization, Manufacturing and Development rights granted under or pursuant to this Agreement are, and will otherwise be deemed to be, for purposes of § 365(n) of the United States Bankruptcy Code, 11 U.S.C. §§ 101 et seq. (the "**Code**") and any similar laws in any other country in the Territory, licenses of rights to "intellectual property" as defined under Section 101 of the Code. The Parties agree that Novartis, as licensee of such rights under this Agreement, will retain and may fully exercise all of its protections, rights and elections under the Code and any similar laws in any other country in the Territory. The Parties further agree that, in the event of the commencement of a bankruptcy proceeding by or against Company under the Code and any similar laws in any other country in the Territory, Novartis will be entitled to a complete duplicate of (or complete access to, as appropriate) any such intellectual property and all embodiments of such intellectual property, and the same, if not already in its possession, will be promptly delivered to it (i) upon any such commencement of a bankruptcy proceeding upon its written request therefor, unless Company elects to continue to perform all of its obligations under this Agreement, or (ii) if not delivered under (i) above, upon written request therefor by Novartis following the rejection of this Agreement by or on behalf of Company.

(b) All rights, powers and remedies of Novartis provided for in this Section 13.6 are in addition to and not in substitution for any and all other rights, powers and remedies now or hereafter existing at law or in equity (including under the Code and any similar laws in any other country in the Territory). In the event of the bankruptcy of Company, Novartis, in addition to the rights, power and remedies expressly provided herein, shall be entitled to exercise all other such rights and powers and resort to all other such remedies as may now or hereafter exist at law or in equity (including under the Code and any similar laws in any other country in the Territory). The Parties agree that they intend the following Novartis rights to extend to the maximum extent permitted by law, including for purposes of the Code and any similar laws in any other country in the Territory: (i) the right of access to any intellectual property (including all embodiments thereof) of Company, or any Third Party with whom Company contracts to perform an obligation of Company under this Agreement which is

necessary for the Development, Manufacture and/or Commercialization of Collaboration Products in the Territory; (ii) the right to contract directly with any Third Party described in (i) to complete the contracted work; and (iii) the right to cure any breach of or default under any such agreement with a Third Party and set off the costs thereof against amounts payable to Company under this Agreement.

13.7 Survival. Notwithstanding anything to the contrary, the following provisions shall survive and continue to apply after expiration or termination of this Agreement in its entirety: Sections 7.3, 8.8 (with respect to tax matters relating to the Term), 8.9(a), 8.9(b) (until the third (3rd) anniversary of the expiration or termination of the Agreement), 8.6, 8.7, 8.10, 9.1, 9.3, 10.1, 10.2, 10.3, 10.5, 15.1, 15.2 and 15.3; and Article 11 (until the applicable statute of limitations has expired), Article 12 (until the date that is [*] years after expiration or termination of the Agreement), Article 13 and Article 16. The expiration or termination of this Agreement for any reason will not affect any payment obligation under this Agreement with respect to payment amounts that have accrued as of the date of such expiration or termination.

Article 14
CHANGE OF CONTROL[*]

14.1 Acquisition; Change of Control.

(a) Notice. In the event of a Change of Control of Company (Company or, if applicable, its successor following a Change of Control, the "**Acquired Party**"), the Acquired Party shall notify Novartis of such Change of Control in writing no later than [*] after the effective date of such Change of Control (a "**Change of Control Notice**").

(b) Election upon Change of Control. Novartis may elect, within [*] of the Change of Control Notice and upon written notice to Company, to effect one of the options described in (i), (ii) or (iii) below:

(i) Continue as a Party to the Collaboration pursuant to the terms of this Agreement;

(ii) Terminate this Agreement effective as of a date specified by Novartis, with the effects described in Section 13.5(a), Section 13.5(b) and Section 13.5(c); or

(iii) Effect an "operational separation" with effects as provided in Section 2.8.

14.2 [*].

(a) [*]. During the [*], except pursuant to and subject to the provisions of this Agreement, [*]. If during the Term a Party or its Affiliates [*], then such Party [*]:

(i) At the discretion and request of [*], the Parties shall discuss [*]. Following such discussions, [*]. If the Parties are [*], then [*].

(ii) If no request is made pursuant to Section 14.2(a)(i), then [*].

(iii) Any such [*]. In the case of [*], the Party and its Affiliates may [*].

(iv) During the [*], provided, however, that such Party [*].

(b) [*]. Each Party acknowledges that [*]. Each Party acknowledges that [*].

(c) [*]. If any [*]. It is the intention of the Parties that [*].

Article 15
GOVERNING LAW; DISPUTE RESOLUTION [*]

15.1 Governing Law. This Agreement (including any claim or controversy arising out of or relating to this Agreement) shall be governed by the law of the State of New York without regard to conflict of laws principles that would result in the application of any laws other than the laws of the State of New York. The United Nations Convention on Contracts for the International Sale of Goods (1980) shall not apply to the interpretation of this Agreement.

15.2 Dispute Resolution.

(a) Unless otherwise set forth in this Agreement (including in Section 9.2), in the event of any dispute arising under this Agreement between the Parties, either Party shall have a right to refer such dispute to the respective Dispute Resolution Officers, and such Dispute Resolution Officers shall attempt in good faith to resolve such dispute. If the Parties are unable to resolve a given dispute pursuant to this Section 15.2(a) within **[*]** of referring such dispute to the Dispute Resolution Officers, any such dispute shall be resolved pursuant to Section 15.2(b); provided that disputes that are subject to a Party's final decision-making authority pursuant to Section 2.5(c) shall not be subject to the dispute resolution procedures in Section 15.2(b) and not subject to further dispute resolution, whether in a court of law, equity or otherwise. THE PARTIES EXPRESSLY WAIVE AND FOREGO ANY RIGHT TO TRIAL BY JURY.

(b) In the event of an unresolved dispute arising under this Agreement between the Parties to a Party's final decision-making authority pursuant to Section 2.5(c) (including any such dispute that is not resolved under Section 15.2(a) within **[*]** of such dispute being referred to the Dispute Resolution Officers), each Party reserves its right to any and all remedies available under Applicable Law or equity with respect to such dispute. Each Party irrevocably submits to the exclusive jurisdiction of the United States District Court for the Southern District of New York for the purposes of any suit, action or other proceeding arising out of this Agreement and subject to this Section 15.2(b). Each Party agrees to commence any such action, suit or proceeding in the United States District Court for the Southern District of New York or if such suit, action or other proceeding may not be brought in such court for jurisdictional reasons, in the Supreme Court of the State of New York, New York County. Each Party irrevocably and unconditionally waives any objection to the laying of venue of any

such action, suit or proceeding arising out of this Agreement in the United States District Court for the Southern District of New York, and hereby and thereby further irrevocably and unconditionally waives and agrees not to plead or claim in any such court that any such action, suit or proceeding brought in any such court has been brought in an inconvenient forum.

15.3 Injunctive Relief; Remedy for Breach of Exclusivity. Nothing in Section 2.5 shall limit or effect a Party's exercise of its rights under this Section 15.3. Notwithstanding anything in this Agreement to the contrary, a Party may seek a temporary restraining order or a preliminary injunction from any court of competent jurisdiction, at any time, in order to prevent immediate and irreparable injury, loss, or damage on a provisional basis, pending the resolution of any dispute hereunder, including under this Article 15.

15.4 [*]. [*].

Article 16
MISCELLANEOUS

16.1 Entire Agreement; Amendment. This Agreement, including the Exhibits hereto, sets forth the complete, final and exclusive agreement and all the covenants, promises, agreements, warranties, representations, conditions and understandings between the Parties with respect to the subject matter hereof and supersedes all prior agreements and understandings between the Parties existing as of the Execution Date with respect to the subject matter hereof, including, the Confidentiality Agreement, dated November 3, 2014, between Company and Novartis Institutes of BioMedical Research, Inc. an Affiliate of Novartis. There are no covenants, promises, agreements, warranties, representations, conditions or understandings, either oral or written, between the Parties other than as are set forth herein. Notwithstanding the authority granted to the JSC and Subcommittees under this Agreement, no subsequent alteration, amendment, change or addition to this Agreement shall be binding upon the Parties unless reduced to writing and signed by an authorized officer of each Party.

16.2 Force Majeure. In the event that either Party is prevented from performing its obligations under this Agreement as a result of any contingency beyond its reasonable control ("**Force Majeure**"), including any actions of Governmental Authorities or agencies, war, terrorism, hostilities between nations, civil commotions, riots, strikes, lockouts, sabotage, shortages in supplies (but only to the extent such shortages are not caused by the nonperforming Party), energy shortages, fire, floods and acts of nature such as typhoons, hurricanes, earthquakes, or tsunamis, the Party so affected shall not be responsible to the other Party for any delay or failure of performance of its obligations hereunder, for so long as Force Majeure prevents such performance. In the event of Force Majeure, the Party immediately affected thereby shall give prompt written notice to the other Party specifying the Force Majeure event complained of, and shall use Commercially Reasonable Efforts to resume performance of its obligations.

16.3 Notices. All notices, consents, waivers, and other communications under this Agreement must be in writing and will be deemed to have been duly given when: (a) delivered

by hand (with written confirmation of receipt); (b) sent by fax (with written confirmation of receipt), provided that a copy is immediately sent by an internationally recognized overnight delivery service (receipt requested); or (c) when received by the addressee, if sent by an internationally recognized overnight delivery service (receipt requested), in each case to the appropriate addresses and fax numbers set forth below (or to such other addresses and fax numbers as a Party may designate by notice):

If to Company:

Aduro Biotech, Inc.
626 Bancroft Way, #3C
Berkeley, CA 94710-2224
Attention: CEO
Office: [*]

With a copy (which shall not constitute notice) to:

Arnold & Porter LLP
399 Park Avenue
New York, NY 10022-4690
Attention: Blaine Templeman
Office: [*]

If to Novartis:

Novartis Institutes for BioMedical Research, Inc.
250 Massachusetts Avenue
Cambridge, MA 02139-4229
Attention: General Counsel
Office: [*]

With a copy (which shall not constitute notice) to:

Kaye Scholer LLP
250 West 55th Street
New York, NY 10019-9710
Attention: Andres Liivak
Office: [*]

Either Party may change its address to which notices shall be sent by giving notice to the other Party in the manner provided herein.

16.4 No Construction Against the Drafter; Headings. This Agreement has been prepared jointly. Ambiguities, if any, in this Agreement shall not be construed against any Party, irrespective of which Party may be deemed to have authored the ambiguous provision.

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

The headings of each Article and Section in this Agreement have been inserted for convenience of reference only and are not intended to limit or expand on the meaning.

16.5 Assignment.

(a) Neither Party may assign its rights and obligations under this Agreement without the other Party's prior written consent, except that without consent of (but with notice to) the other Party (i) Novartis may assign its rights and obligations under this Agreement or any part hereof to one or more of its Affiliates and (ii) Company may assign its rights and obligations under this Agreement or any part hereof to one or more of its Affiliates. Any request for consent to assignment shall not be unreasonably withheld or delayed. Any permitted assignee will assume all obligations of its assignor under this Agreement (or related to the assigned portion in case of a partial assignment). Any attempted assignment in contravention of this Section 16.5 will be void. Subject to the terms of this Agreement, this Agreement will be binding upon and inure to the benefit of the Parties and their respective successors and permitted assigns.

(b) Each Party agrees that, notwithstanding any provision of this Agreement to the contrary:

(i) either Party may assign this Agreement and the rights, obligations and licenses granted hereunder to a Third Party in connection with a Change of Control; and

(ii) in the event that this Agreement is assigned by either Party in connection with a Change of Control, such assignment shall not provide (A) the non-assigning Party with rights or access to intellectual property rights of the assignee or acquirer of such Party, nor (B) the assignee or acquirer with rights or access to intellectual property rights of the non-assigning Party.

16.6 Performance by Affiliates. Each Party may discharge any obligations and exercise any right hereunder through any of its Affiliates. Each Party hereby guarantees the performance by its Affiliates of such Party's obligations under this Agreement, and shall cause its Affiliates to comply with the provisions of this Agreement in connection with such performance. Any breach by a Party's Affiliate of any of such Party's obligations under this Agreement shall be deemed a breach by such Party, and the other Party may proceed directly against such Party without any obligation to first proceed against such Party's Affiliate. Each Party shall remain primarily liable for any acts or omissions of its Affiliates.

16.7 Further Assurances. The Parties hereby covenant and agree without the necessity of any further consideration, to execute, acknowledge and deliver any and all such other documents and take any such other action as may be reasonably necessary to carry out the intent and purposes of this Agreement.

16.8 Compliance with Law. Each Party shall perform its obligations under this Agreement in accordance with all Applicable Law, including cooperation with tax filings as applicable. No Party shall, or shall be required to, undertake any activity under or in connection with this Agreement which violates, or which it believes, in good faith, may violate, any Applicable Law.

16.9 Severability. Should one or more of the provisions of this Agreement become void or unenforceable as a matter of law, then this Agreement shall be construed as if such provision were not contained herein and the remainder of this Agreement shall be in full force and effect, and the Parties will use their Commercially Reasonable Efforts to substitute for the invalid or unenforceable provision a valid and enforceable provision which conforms as nearly as possible with the original intent of the Parties, including, as nearly as possible, the same economic benefit to each Party.

16.10 No Waiver. Any delay in enforcing a Party's rights under this Agreement or any waiver as to a particular default or other matter shall not constitute a waiver of such Party's rights to the future enforcement of its rights under this Agreement, except with respect to an express written and signed waiver relating to a particular matter for a particular period of time.

16.11 Relationship of the Parties. Nothing contained in this Agreement shall be deemed to constitute a partnership, joint venture, or legal entity of any type between the Parties, or to constitute one as the agent of the other. Moreover, each Party agrees not to construe this Agreement, or any of the transactions contemplated hereby, as a partnership for any tax purposes, unless so required by applicable tax legislation, regulation or rulings. Each Party shall act solely as an independent contractor, and nothing in this Agreement shall be construed to give any Party the power or authority to act for, bind, or commit the other.

16.12 No Third Party Beneficiary Rights. The provisions of this Agreement are for the sole benefit of the Parties and their successors and permitted assigns, and the Agreement shall not be construed as conferring any rights to any Third Party (including any Third Party beneficiary rights), except in the case of Article 11, Novartis Indemnitees and Company Indemnitees, as applicable.

16.13 English Language. This Agreement is written and executed in the English language. Any translation into any other language shall not be an official version of this Agreement and, in the event of any conflict in interpretation between the English version and such translation, the English version shall prevail.

16.14 Expenses. Except as otherwise expressly provided in this Agreement, each Party shall pay the fees and expenses of its respective lawyers and other experts and all other expenses and costs incurred by such Party incidental to the negotiation, preparation, execution and delivery of this Agreement.

16.15 Counterparts. This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

[*Remainder of Page Left Intentionally Blank*]

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

IN WITNESS WHEREOF, the Parties have executed this Agreement in duplicate originals by their duly authorized officers as of the Execution Date.

ADURO BIOTECH, INC.

By: /s/ Stephen T. Isaacs
Name: Stephen T. Isaacs
Title: Chairman and CEO

NOVARTIS PHARMACEUTICALS CORPORATION

By: /s/ Bruno Strigini
Name: Bruno Strigini
Title: President, Novartis Oncology

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

Exhibit 1(A)

Company Patents

< 4 pages omitted>

[*]

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

Exhibit 1(B)

Existing Third Party Licenses

[*]

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

Exhibit 1(C)

Novartis Patents

Novartis patent applications to be filed on compounds disclosed in Exhibit 10.3(b)

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

Exhibit 3.3(d)

Development Cost Sharing Percentage
<2 pages omitted>

[*]

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

Exhibit 8.5

Form of Sublicense Agreement

<11 pages omitted>

[*]

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

Exhibit 10.2(b)

Complete and accurate list of all licenses, assignment, distribution or other agreements relating to Company Patents

<2 pages omitted>

[*]

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

Exhibit 10.3(b)

List of [*] included within Novartis Know-How as of the Effective Date

[*]

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

Exhibit 10.3(c)

Complete and accurate list of all license, assignment, distribution or other agreements relating to the Novartis Patents

[*]

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

March 19, 2014

VIA EMAIL PDF

Bruno Strigini
President, Novartis Oncology
Novartis Pharmaceuticals Corporation
One Health Plaza
East Hanover, New Jersey 07936

RE: Effective Date of Collaboration and License Agreement

Dear Bruno Strigini:

Aduro Biotech, Inc. ("**Aduro**") and Novartis Pharmaceuticals Corporation ("**Novartis**") are parties to the Collaboration and License Agreement entered into as of March 12, 2012 (the "**Agreement**"). Aduro and Novartis hereby agree that: (i) Sections 1.91, 1.172 and 15.4 of the Agreement are hereby deleted and shall be of no further force or effect; and (ii) Section 1.68 of the Agreement, the definition of the term "Effective Date", is hereby amended and replaced in its entirety by the following: "Effective Date" means March 19, 2015.

This letter amendment is intended by each of Aduro and Novartis to create, and hereby creates, a binding legal agreement which shall be enforceable in accordance with its terms. The Agreement continues in full force and effect in accordance with its terms, as amended by this letter amendment. Except as expressly set forth in and as contemplated by this letter amendment, the Agreement shall not be amended hereby. Please confirm your agreement with the foregoing by countersigning both copies of this letter where indicated and returning a copy of this letter amendment to Aduro.

Very truly yours,

Aduro Biotech, Inc.

By: /s/ Stephen Isaacs
Name: Stephen Isaacs
Title: Chairman & CEO

Accepted and agreed:

Novartis Pharmaceuticals Corporation

By: /s/ Bruno Strigini
Name: Bruno Strigini
Title: President, Novartis Oncology

[*] = Certain confidential information contained in this document, marked by brackets, has been omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 406 of the Securities Act of 1933, as amended.

EXECUTION VERSION

Exhibit 10.35

ADURO BIOTECH, INC.

SERIES E PREFERRED STOCK PURCHASE AGREEMENT

THIS SERIES E PREFERRED STOCK PURCHASE AGREEMENT (the "***Agreement***") is made as of March 12, 2015 (the "***Execution Date***") by and between Aduro Biotech, Inc., a Delaware corporation (the "***Company***"), and Novartis Institutes for BioMedical Research, Inc., a Delaware corporation (the "***Investor***").

RECITALS

WHEREAS, pursuant to terms set forth in this Agreement the Company desires to sell to the Investor, and the Investor desires to purchase from the Company, shares of the Company's Series E Preferred Stock, par value $0.0001 per share (the "***Series E Preferred***");

NOW, **THEREFORE**, in consideration of the premises and mutual covenants herein contained, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

SECTION 1

Purchase and Sale of Shares

1.1 ***Authorization***. The Company has, or before Closing (as defined in Section 1.3) will have, duly authorized the sale and issuance, pursuant to the terms of this Agreement, of 2,361,029 shares of Series E Preferred, having the rights, privileges, preferences and restrictions set forth in the Company's Amended and Restated Certificate of Incorporation in substantially the form attached as Exhibit A hereto, adopted and filed with the Secretary of State of Delaware on or before the Closing (the "***Restated Certificate***").

1.2 ***Sale of Shares***. Subject to the terms and conditions of this Agreement, the Company will sell and issue to the Investor, and the Investor will purchase, an aggregate of 2,361,029 shares of Series E Preferred for the cash purchase price of $10.5886 per share (the "***Purchase Price***"). The shares of Series E Preferred sold under this Agreement are collectively referred to as the "***Shares***."

1.3 ***Closing***. The purchase and sale of the Shares shall take place at a closing (the "***Closing***") to be held at the offices of Cooley LLP, 3175 Hanover Street, Palo Alto, California 94304-1130, on the second business day (the "***Closing Date***") following the satisfaction or waiver of each of the conditions set forth in Sections 4 and 5 hereof (other than those conditions that are to be satisfied at the Closing, but subject to satisfaction or waiver of such conditions). At the Closing, the Company will deliver or cause to be delivered to the Investor a certificate or certificates representing the Shares that the Investor is purchasing and, concurrently, the Investor shall purchase the Shares at a price per share equal to the Purchase Price by wire transfer in accordance with the Company's instructions, which shall be provided in writing no later than two business days prior to the Closing Date.

SECTION 2

Representations and Warranties of the Company

Except as set forth on the Schedule of Exceptions delivered by the Company to the Investor on the date hereof, the Company hereby represents and warrants the following as of the date hereof and as of the Closing Date (except for the representations and warranties that speak as of a specific date, which shall be made as of such date). For purposes of these representations and warranties (other than those set forth in Sections 2.2, 2.4 and 2.6) the term "Company" includes any subsidiaries of the Company.

2.1 ***Organization and Good Standing and Qualifications***. The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and has full corporate power and authority to conduct its business as presently conducted and as proposed to be conducted by it. The Company is duly qualified to do business as a foreign corporation in California and is in good standing under the laws of such State. The Company is not required to be qualified to do business as a foreign corporation in any other jurisdiction in which the failure so to qualify would have a material adverse effect on the business, prospects, assets or condition (financial or otherwise) of the Company (a "***Company Material Adverse Effect***"). The Company has furnished to the Investor complete and accurate copies of its Certificate of Incorporation and By-laws, each as amended to date and presently in effect. The Company has at all times complied with all provisions of its Certificate of Incorporation and By-laws and is not in default under, or in violation of, any such provision. The Company is not, and has never been, a "shell company," as described in paragraphs (i)(1)(i) and (ii) of Rule 144 promulgated under the Securities Act of 1933, as amended (the "***Securities Act***").

2.2 ***Subsidiaries, Etc***. Except as set forth in Section 2.2 of the Schedule of Exceptions, the Company has no subsidiaries and does not own or control, directly or indirectly, any shares of capital stock of any other corporation or any interest in any partnership, limited liability company, joint venture or other non-corporate business enterprise.

2.3 ***Authorization***. The execution, delivery and performance by the Company of this Agreement, and the consummation by the Company of the transactions contemplated hereby, have been duly authorized by all necessary corporate action. This Agreement has been duly executed and delivered by the Company and constitutes a valid and binding obligation of the Company enforceable against the Company in accordance with its respective terms. The execution and delivery of this Agreement, the consummation of the transactions contemplated hereby and the compliance with the provisions of this Agreement by the Company will not (a) conflict with or violate any provision of the Certificate of Incorporation or By-laws of the Company, (b) conflict with, result in a breach of, constitute (with or without due notice or lapse of time or both) a default under, result in the acceleration of obligations under, create in any party the right to accelerate, terminate, modify or cancel, or require any notice, consent or waiver under, any contract, lease, sublease, license, sublicense, franchise, permit, indenture, agreement or mortgage for borrowed money, instrument of indebtedness, Security Interest (as defined below) or other arrangement to which the Company is a party or by which the Company is bound or to which its assets are subject, (c) result in the imposition of any Security Interest upon any assets of the Company or (d) violate any order, writ, injunction, decree, statute, rule or regulation applicable to the Company or any of its

properties or assets. For purposes of this Agreement, "***Security Interest***" means any mortgage, pledge, security interest, encumbrance, charge or other lien (whether arising by contract or by operation of law).

2.4 ***Valid Issuance of Shares***. The issuance, sale and delivery of the Shares in accordance with this Agreement, and the issuance and delivery of the shares of Common Stock issuable upon conversion of the Shares, have been, or will be on or prior to the Closing, duly authorized by all necessary corporate action on the part of the Company, and all such shares have been duly reserved for issuance. The Shares when so issued, sold and delivered against payment therefor in accordance with the provisions of this Agreement, and the shares of Common Stock issuable upon conversion of the Shares, when issued upon such conversion, will be duly and validly issued, fully paid and nonassessable, and free of restrictions on transfer other than restrictions imposed or created under this Agreement, by applicable law, or by the Investor.

2.5 [Intentionally omitted.]

2.6 ***Capitalization***.

(a) The authorized capital stock of the Company as of the date of this Agreement consists of (i) 85,000,000 shares of Common Stock, $0.0001 par value per share, of which 589,214 shares are issued and outstanding and none are held in the treasury of the Company, and (ii) 69,716,345 shares of Preferred Stock, $0.0001 par value per share, of which (A) 161,843 shares have been designated as Series A Preferred, all of which are issued and outstanding, (B) 3,393,666 shares have been designated as Series A-1 Preferred, 3,369,431 of which are issued and outstanding, (C) 21,525,480 shares have been designated as Series B Preferred, 21,441,709 of which are issued and outstanding, (D) 25,623,183 shares have been designated as Series C Preferred, all of which are issued and outstanding and (E) 19,012,173 shares have been designated as Series D Preferred, all of which are issued and outstanding. Since the Execution Date, the Company has not issued any Additional Shares of Common Stock without consideration or for a consideration per share less than the Series E Conversion Price (each as defined in the Restated Charter), or issued any shares of Series E Preferred.

(b) Section 2.6(b) of the Schedule of Exceptions includes a complete and accurate list, as of the date of this Agreement, of the holders of capital stock of the Company, showing the number of shares of capital stock, and the class or series of such shares, held by each stockholder and (for shares other than Common Stock) the number of shares of Common Stock (if any) into which such shares are convertible, immediately prior to the Closing. Section 2.6(b) of the Schedule of Exceptions also indicates all outstanding shares of Common Stock that constitute restricted stock or that are otherwise subject to a repurchase or redemption right, indicating the name of the applicable stockholder, the vesting schedule (including any acceleration provisions with respect thereto), and the repurchase price payable by the Company. All of the issued and outstanding shares of capital stock of the Company have been duly authorized and validly issued and are fully paid and nonassessable. All of the issued and outstanding shares of capital stock of the Company have been offered, issued and sold by the Company in compliance with all applicable federal and state securities laws.

(c) Section 2.6(c) of the Schedule of Exceptions includes a complete and accurate list, as of the date of this Agreement of: (i) all stock option plans and other stock or equity-related plans of the Company (the "***Company Stock Plans***"), indicating for each Company Stock Plan the number of shares of Common Stock issued to date under such Plan, the number of shares subject to outstanding options under such Plan and the number of shares reserved for future issuance under such Plan; (ii) all holders of outstanding options to purchase shares of Common Stock ("***Company Stock Options***"), indicating with respect to each Company Stock Option the Company Stock Plan under which it was granted, the number of shares of Common Stock subject to such Company Stock Option, the exercise price, the date of grant and the vesting schedule (including any acceleration provisions with respect thereto); and (iii) all holders of warrants or other rights (other than Company Stock Options and convertible preferred stock) to purchase or acquire shares of capital stock of the Company (collectively, the "***Company Warrants***"), indicating with respect to each Company Warrant the agreement or other document under which it was granted, the number of shares of capital stock, and the class or series of such shares, subject to such Company Warrant, the exercise price, the date of issuance and the expiration date thereof. The Company has furnished to the Investor complete and accurate copies of all Company Stock Plans, forms of all stock option agreements evidencing Company Stock Options and all Company Warrants. All of the shares of capital stock of the Company subject to Company Stock Options and Company Warrants will be, upon issuance pursuant to the exercise of such instruments, duly authorized, validly issued, fully paid and nonassessable.

(d) Except as set forth in Section 2.6(c) and Section 2.6(d) of the Schedule of Exceptions, (i) no subscription, warrant, option, convertible security or other right (contingent or otherwise) to purchase or acquire any shares of capital stock of the Company is authorized or outstanding, (ii) the Company has no obligation (contingent or otherwise) to issue any subscription, warrant, option, convertible security or other such right, or to issue or distribute to holders of any shares of its capital stock any evidences of indebtedness or assets of the Company, (iii) the Company has no obligation (contingent or otherwise) to purchase, redeem or otherwise acquire any shares of its capital stock or any interest therein or to pay any dividend or to make any other distribution in respect thereof, and (iv) there are no outstanding or authorized stock appreciation, phantom stock or similar rights with respect to the Company.

(e) Except as set forth in Section 2.6(e) of the Schedule of Exceptions, there is no agreement, written or oral, between the Company and any holders of its securities, or, to the best of the Company's knowledge, among any holder of its securities, relating to the sale or transfer (including without limitation agreements relating to rights of first refusal, co sale rights or "drag along" rights), registration under the Securities Act, or voting, of the capital stock of the Company.

2.7 ***Financial Statements***. The Company has furnished to the Investor a complete and accurate copy of (a) the audited balance sheet of the Company at December 31, 2014 (the "***Balance Sheet Date***") and the related audited statement of operations for the fiscal year then ended (collectively, the "***Financial Statements***"). The Financial Statements are in accordance with the books and records of the Company and present fairly the financial condition and results of operations of the Company, at the dates and for the periods indicated.

2.8 ***Material Adverse Change***. Except as set forth in Section 2.8 of the Schedule of Exceptions, since the Balance Sheet Date, there has not been:

(a) any change in the assets, liabilities, financial condition or operating results of the Company from that reflected in the Financial Statements, except changes in the ordinary course of business that have not caused, in the aggregate, a Company Material Adverse Effect;

(b) any damage, destruction or loss, whether or not covered by insurance, that would have a Company Material Adverse Effect;

(c) any waiver or compromise by the Company of a valuable right or of a material debt owed to it;

(d) any satisfaction or discharge of any lien, claim, or encumbrance or payment of any obligation by the Company, except in the ordinary course of business and the satisfaction or discharge of which would not have a Company Material Adverse Effect;

(e) any material change to a material contract or agreement by which the Company or any of its assets is bound or subject;

(f) any material change in any compensation arrangement or agreement with any employee, officer, director or stockholder;

(g) any resignation or termination of employment of any officer or Key Employee of the Company;

(h) any mortgage, pledge, transfer of a security interest in, or lien, created by the Company, with respect to any of its material properties or assets, except liens for taxes not yet due or payable and liens that arise in the ordinary course of business and do not materially impair the Company's ownership or use of such property or assets;

(i) any loans or guarantees made by the Company to or for the benefit of its employees, officers or directors, or any members of their immediate families, other than travel advances and other advances made in the ordinary course of its business;

(j) any declaration, setting aside or payment or other distribution in respect of any of the Company's capital stock, or any direct or indirect redemption, purchase, or other acquisition of any of such stock by the Company;

(k) any sale, assignment or transfer of any Company Intellectual Property that could reasonably be expected to result in a Company Material Adverse Effect;

(l) receipt of notice that there has been a loss of, or material order cancellation by, any major customer of the Company;

(m) to the Company's knowledge, any other event or condition of any character, other than events affecting the economy or the Company's industry generally, that could reasonably be expected to result in a Company Material Adverse Effect; or

(n) any arrangement or commitment by the Company to do any of the things described in this Section 2.8.

2.9 ***No Undisclosed Liabilities***. Except as set forth in Section 2.9 of the Schedule of Exceptions, the Company does not have any liability (whether known or unknown and whether absolute or contingent), except for (a) liabilities shown expressly, or included in amounts shown, on the Balance Sheet, (b) liabilities less than $250,000 on an individual basis, which have arisen since the Balance Sheet Date in the ordinary course of business and which are similar in nature and amount to the liabilities which arose during the comparable period of time in the immediately preceding fiscal period and (c) contractual liabilities incurred in the ordinary course of business which are not required by GAAP to be reflected on a balance sheet and which would not, either individually or in the aggregate, have or result in a Company Material Adverse Effect.

2.10 ***Governmental Consents***. No consent, approval, order or authorization of, or registration, qualification, designation, declaration or filing with, any court, arbitrational tribunal, administrative agency or commission or other governmental or regulatory authority or agency (each of the foregoing is hereafter referred to as a "***Governmental Entity***") is required on the part of the Company in connection with the offer, issuance, sale and delivery of the Shares, or the issuance and delivery of the shares of Common Stock issuable upon conversion of the Shares, as contemplated by this Agreement, except such filings as shall have been made prior to and shall be effective on and as of the Closing and such filings required to be made after the Closing under applicable federal and state securities laws, all of which filings are specified in the Schedule of Exceptions. Based on the representations made by the Investor in Section 3 of this Agreement, the offer and sale of the Shares to the Investor will be in compliance with applicable federal and state securities laws.

2.11 ***Actions Pending***. There is no action, suit or proceeding, or governmental inquiry or investigation, pending, or, to the best of the Company's knowledge, any basis therefor or threat thereof, against the Company or any officer, director or Key Employee of the Company, which questions the validity of this Agreement or the right of the Company to enter into such agreement or to consummate the transactions contemplated hereby. There is no litigation pending, or, to the best of the Company's knowledge, any basis therefor or threat thereof, against the Company or any of its employees by reason of the past employment relationships of any of the employees, the proposed activities of the Company, or negotiations by the Company with possible investors in the Company. The Company is not subject to any outstanding judgment, order or decree.

2.12 ***Foreign Corrupt Practices Act, OFAC and Anti-Money Laundering***.

(a) None of the Company, its subsidiaries or, to the knowledge of the Company, any of the Company's directors, officers, employees or agents has taken any action, directly or indirectly, that would result in a violation by such persons of the Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (the "***FCPA***"), including, without limitation, making use of the mails or any means or instrumentality of interstate commerce corruptly in furtherance of an offer, payment, promise to pay or authorization of the payment of any money, or other property, gift, promise to give, or authorization of the giving of anything of value to any "foreign official" (as such term is defined in the FCPA) or any foreign political party or official thereof or any candidate for foreign political office, in contravention of the FCPA and the Company and its subsidiary have conducted their businesses in compliance with the FCPA and have instituted and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

(b) Neither the Company nor any of its subsidiaries nor, to the knowledge of the Company, any director, officer, agent, employee, or person acting on behalf of the Company or any subsidiary is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("***OFAC***"), and the Company will not directly or indirectly use the proceeds of the sale of the Shares, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity, towards any sales or operations in Cuba, Iran, Syria, Sudan, Myanmar or any other country sanctioned by OFAC or for the purpose of financing the activities of any person currently subject to any U.S. sanctions administered by OFAC.

(c) The operation of each of the Company and its subsidiaries are and have been conducted at all times in compliance with the money laundering statues of applicable jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any applicable governmental agency (collectively, the "***Money Laundering Laws***"), and no action suit or proceeding by or before any court of governmental agency, authority or body or any arbitrator involving the Company and/or any subsidiary with respect to the Money Laundering Laws is pending, or to the Company's knowledge, threatened.

2.13 ***Data Privacy***. In connection with its collection, storage, transfer (including, without limitation, any transfer across national borders) and/or use of any personally identifiable information from any individuals, including, without limitation, any customers, prospective customers, employees and/or other third parties (collectively "***Personal Information***"), the Company is and has been in compliance with all applicable laws in all relevant jurisdictions, the Company's privacy policies and the requirements of any contract or codes of conduct to which the Company is a party. The Company has commercially reasonable physical, technical, organizational and administrative security measures and policies in place to protect all Personal Information collected by it or on its behalf from and against unauthorized access, use and/or disclosure. The Company is and has been in compliance in all material respects with all laws relating to data loss, theft and breach of security notification obligations

2.14 ***Compliance with Law***. The Company has, in all material respects, complied with all laws, regulations and orders applicable to its present and proposed business and has all material permits and licenses required thereby. There is no term or provision of any mortgage, indenture, contract, agreement or instrument to which the Company is a party or by which it is bound, or, to the best of the Company's knowledge, of any provision of any state or federal judgment, decree, order, statute, rule or regulation applicable to or binding upon the Company, which materially adversely affects or, so far as the Company may now foresee, in the future is reasonably likely to materially adversely affect the Company. To the best of the Company's knowledge, no employee of the Company is in violation of any term of any contract or covenant (either with the Company or with another entity) relating to employment, patents, assignment of inventions, proprietary information disclosure, non-competition or non-solicitation.

2.15 ***Exemption from Registration, Valid Issuance***. Subject to, and in reliance on, the representations, warranties and covenants made herein by the Investor, the issuance and sale of the Shares in accordance with the terms and on the bases of the representations and warranties set forth in this Agreement, may and shall be properly issued pursuant to Section 4(a)(2) of the Securities Act, Regulation D promulgated pursuant to the Act ("***Regulation D***") and/or any other applicable

federal and state securities laws. The sale and issuance of the Shares pursuant to, and the Company's performance of its obligations under, this Agreement will not (i) result in the creation or imposition of any liens, charges, claims or other encumbrances upon the Shares or any of the assets of the Company, or (ii) except as set forth in Section 2.15 of the Schedule of Exceptions, entitle the holders of any outstanding shares of capital stock of the Company to preemptive or other rights to subscribe to or acquire the Shares or other securities of the Company.

2.16 ***Taxes***.

(a) For purposes of this Agreement: (i) "**Tax**" or "**Taxes**" means all taxes, charges, fees, levies or other similar assessments or liabilities, including without limitation income, gross receipts, ad valorem, premium, value-added, excise, real property, personal property, sales, use, transfer, withholding, employment, unemployment insurance, social security, business license, business organization, environmental, workers compensation, payroll, profits, license, lease, service, service use, severance, stamp, occupation, windfall profits, customs, duties, franchise and other taxes imposed by the United States of America or any state, local or foreign government, or any other Governmental Entity, and any interest, fines, penalties, assessments or additions to tax resulting from, attributable to or incurred in connection with any tax or any contest or dispute thereof, and any liability for the payment of the foregoing as a result of being a member of an affiliated, combined, consolidated or unitary group for any period, as a result of any tax sharing or tax allocation agreement, arrangement or understanding, or as a result of being liable for another person's taxes as a transferee or successor, by contractual obligation or otherwise; and (ii) "**Tax Returns**" means all reports, returns, declarations, statements or other information, including any schedule or attachment thereto, required to be supplied to a taxing authority in connection with Taxes and any amendment thereof.

(b) The amount shown on the Balance Sheet as provision for Taxes is sufficient in all material respects for the payment of all unpaid Taxes, whether or not disputed, for all periods ending on or before the date thereof. The Company has timely filed or obtained presently effective extensions with respect to all Tax Returns that are or were required to be filed by it, and such Tax Returns are complete and accurate in all material respects. All Taxes have been timely paid, whether or not shown on such Tax Returns. All Taxes that the Company is or was required by law to have withheld or collected have been duly withheld or collected and, to the extent required, have been timely paid to the proper Governmental Entity, and the Company has complied with all related recordkeeping requirements. The Tax Returns of the Company have not been audited by any Governmental Entity, the Company has not agreed to any waivers of statutes of limitations with respect to Taxes, and no controversy with respect to Taxes is pending or, to the best of the Company's knowledge, threatened. No claim has ever been made by any Governmental Entity in a jurisdiction where the Company does not file Tax Returns that the Company is or may be subject to taxation by that jurisdiction, and, to the Company's knowledge, there is no basis for any such claim to be made. Neither the Company nor any of its stockholders has ever filed an election pursuant to Section 1362 of the Internal Revenue Code of 1986, as amended (the "***Code***"), that the Company be taxed as an S corporation. The Company's net operating losses, as set forth in the Financial Statements, are not subject to any limitations imposed by Section 382 of the Code or comparable provisions of state, local, or foreign law, and consummation of the transactions contemplated by this Agreement or by any other agreement, understanding or commitment, contingent or otherwise, to which the Company is a party or by which it is otherwise bound will not have the effect of limiting

the Company's ability to use such net operating losses in full to offset taxable income. The Company does not have any liabilities for Taxes of any other person or entity by contract, as a transferee or successor, under U.S. Treasury Regulation section 1.1502-6 or analogous state, county, local or foreign provision or otherwise.

(c) The Company is not now and has never been a "United States real property holding corporation" as defined in Section 897(c)(2) of the Code and the Treasury Regulations thereunder.

2.17 ***Investment Company***. The Company is not an investment company within the meaning of the Investment Company Act of 1940, as amended.

2.18 ***Shell Company***. The Company is not, and has never been, an issuer identified in Rule 144(i)(1) promulgated under the Securities Act

2.19 ***Brokers***. Except as set forth in Section 2.19 of the Schedule of Exceptions, no brokers, finders or financial advisory fees or commissions will be payable by the Company or any of its subsidiaries in respect of the transactions contemplated by this Agreement.

2.20 ***Property and Assets***. The Company has good title to, or a valid leasehold interest in, all of its material properties and assets, including all properties and assets reflected in the Balance Sheet, except those disposed of since the date thereof in the ordinary course of business, and none of such properties or assets is subject to any Security Interest other than those the material terms of which are described in the Balance Sheet or in the Schedule of Exceptions.

2.21 ***Intellectual Property***.

(a) The Schedule of Exceptions includes a complete and accurate list of (i) each patent, patent application, copyright registration or application therefor, and trademark, service mark and domain name registration or application therefor of the Company and (ii) each Product Candidate (as defined below) owned or in-licensed by the Company.

(b) To the best of the Company's Knowledge, the Company is the owner, licensee or has the right to use all Company Intellectual Property (as defined below) necessary (i) to research, develop, use, manufacture, market and sell the Product Candidates and (ii) to operate the Internal Systems (as defined below). The Company has taken all reasonable measures to protect the proprietary nature of each item of Company Intellectual Property (as defined below), and to maintain in confidence all trade secrets and confidential information, that it owns or uses. To the best of the Company's Knowledge, (i) the patents and patent applications that constitute Company Intellectual Property have been prepared, filed and prosecuted in accordance with all applicable laws and regulations and (ii) any issued patents that constitute Company Intellectual Property are valid or enforceable. To the best of the Company's Knowledge, no other person or entity has any rights to any of the Company Intellectual Property owned by the Company (except pursuant to agreements or licenses specified in the Schedule of Exceptions), and no other person or entity is infringing, violating or misappropriating any of the Company Intellectual Property. To the best of the Company's Knowledge, there are no pending or threatened legal or governmental proceedings relating to any Company Intellectual Property, other than ex parte examination proceedings before the US Patent and Trademark Office or ex parte examination proceedings or oppositions before corresponding foreign patent offices.

(c) To the best of the Company's Knowledge, as of the date of this Agreement, none of the Product Candidates, or the research, development, manufacture, marketing, sale, offer to sell, importation, provision or use thereof, infringes or would infringe, or violates or would violate, or constitutes or would constitute a misappropriation of, any Intellectual Property rights of any person or entity. To the best of the Company's Knowledge, none of the Internal Systems, or the use thereof, infringes or violates, or constitutes a misappropriation of, any Intellectual Property rights of any person or entity. The Schedule of Exceptions lists any complaint, claim or notice, or written threat thereof, received by the Company alleging any such infringement, violation or misappropriation; and the Company has provided to the Investor complete and accurate copies of all written documentation in the possession of the Company relating to any such complaint, claim, notice or threat. The Company has furnished to the Investor complete and accurate copies of all written documentation in the Company's possession relating to claims or disputes (including without limitation as to validity, inventorship, ownership or enforceability) known to the Company concerning any Company Intellectual Property.

(d) The Schedule of Exceptions identifies each license or other agreement, including material transfer agreements, pursuant to which the Company has licensed, distributed or otherwise granted any rights to any third party or which the licensor or inventor has granted any rights with respect to, any Company Intellectual Property. Except as described in the Schedule of Exceptions, the Company has not agreed to indemnify any person or entity against any infringement, violation or misappropriation of any Intellectual Property rights with respect to any Company Intellectual Property.

(e) The Schedule of Exceptions identifies each item of Company Intellectual Property that is owned by a party other than the Company, and the license or agreement pursuant to which the Company uses it (excluding off-the-shelf software programs licensed by the Company pursuant to "shrink wrap" or "click through" licenses).

(f) All of the copyrightable materials incorporated in, underlying or used with the Company Intellectual Property have been created by employees of the Company within the scope of their employment by the Company or by independent contractors of the Company who have executed agreements expressly assigning all right, title and interest in such copyrightable materials to the Company. No portion of such copyrightable materials was jointly developed with any third party.

(g) For purposes of this Agreement (except for the knowledge definition below, which shall be applicable solely to this Section 2.21), the following terms shall have the following meanings:

(i) "***Company Intellectual Property***" shall mean the Intellectual Property owned by or licensed to the Company and incorporated in, underlying or used in connection with the Product Candidates or the Internal Systems, including, without limitation, the patent and trademark rights identified in the Schedule of Exceptions.

(ii) "***Intellectual Property***" shall mean all: (A) patents, patent applications, patent disclosures and all related continuation, continuation-in-part, divisional, reissue, reexamination, utility model, certificate of invention and design patents, patent applications, registrations and applications for registrations; (B) trademarks, service marks, trade dress, Internet domain names, logos, trade names and corporate names and registrations and applications for registration thereof; (C) copyrights and registrations and applications for registration thereof; (D) computer software, data and documentation; (E) inventions, trade secrets and confidential business information, whether patentable or nonpatentable and whether or not reduced to practice, know-how, manufacturing and product processes and techniques, formulae, research and development information, copyrightable works, financial, marketing and business data, pricing and cost information, business and marketing plans and customer and supplier lists and information; (F) other proprietary rights relating to any of the foregoing (including remedies against infringements thereof and rights of protection of interest therein under the laws of all jurisdictions); and (G) copies and tangible embodiments thereof.

(iii) "***Internal Systems***" shall mean the internal systems of the Company that are used in its business or operations, including, computer hardware systems, software applications and embedded systems.

(iv) "***Key Employees***" shall mean the following officers: Dirk G. Brockstedt, Thomas Dubensky, Jr., Stephen T. Isaacs, Jennifer Lew and Gregory Schafer.

(v) "***Knowledge***," including the phrase "***to the Company's Knowledge***," shall mean the actual knowledge after reasonable investigation of the Key Employees.

(vi) "***Product Candidates***" shall mean (A) the therapeutic vaccines and other products that the Company (1) currently develops, manufactures, markets, sells or licenses or (2) currently plans to develop, manufacture, market, sell or license in the future and (B) the services that the Company (1) currently provides or (2) currently plans to provide in the future.

2.22 ***Insurance***. The Company maintains valid policies of workers' compensation insurance and of insurance with respect to its properties and business of the kinds and in the amounts not less than is customarily obtained by corporations of established reputation engaged in the same or similar business and similarly situated, including, without limitation, insurance against loss, damage, fire, theft, public liability and other risks.

2.23 ***Material Contracts and Obligations***. The Schedule of Exceptions sets forth a list of all material agreements or commitments of any nature (whether written or oral) to which the Company is a party or by which it is bound, including without limitation (a) any agreement which requires future expenditures by the Company in excess of $500,000 or which might result in payments to the Company in excess of $500,000, (b) any employment agreement, employee benefit, bonus, pension, profit-sharing, stock option, stock purchase or similar plan or arrangement, (c) any distributor, sales representative or similar agreement, (d) any agreement with any current or former stockholder, officer or director of the Company, or any "affiliate" or "associate" of such persons (as such terms are defined in the rules and regulations promulgated under the Securities Act), including without limitation any agreement or other arrangement providing for the furnishing of services by, rental of real or personal property from, or otherwise requiring payments to, any such person or

entity, (e) any agreement under which the Company is restricted from carrying on any business anywhere in the world, (f) any agreement relating to indebtedness for borrowed money, (g) any agreement for the disposition of a material portion of the Company's assets (other than for the sale of inventory in the ordinary course of business), (h) any agreement for the acquisition of the business or securities or other ownership interests of another party, (i) any agreement for the license of any patent, copyright, trademark, trade secret or other proprietary right to or from the Company (other than licenses by the Company of "off the shelf" or other commercially available standard products) or (j) any other agreement that is material to the operations, business or finances of the Company. The Company has furnished to the Investor copies of the foregoing agreements (or an accurate summary of any oral agreement). All of such agreements and contracts are valid, binding against the Company and in full force and effect. Neither the Company, nor, to the best of the Company's knowledge, any other party thereto, is in default of any of its obligations under any of the agreements or contracts listed in the Schedule of Exceptions.

2.24 ***Employees***.

(a) All current and former employees of the Company have executed and delivered Confidential Information and Inventions Assignments and Non-Solicitation Agreements in the form of Exhibit B and all of such agreements are in full force and effect. All current and former consultants of the Company that have performed development work or provided technical services to the Company or have otherwise had access to confidential or proprietary information of the Company have executed and delivered non-disclosure and assignment of inventions agreements copies of which have been made available to the Investor, and all of such agreements are in full force and effect.

(b) The Company is not aware that any employee of the Company has plans to terminate his or her employment relationship with the Company. Except as set forth in Section 2.24(b) of the Schedule of Exceptions, all employees of the Company are engaged by the Company on a full time basis. The Company has complied in all material respects with all applicable laws relating to wages, hours, equal opportunity, collective bargaining, workers' compensation insurance and the payment of social security and other Taxes. None of the employees of the Company is represented by any labor union, and there is no labor strike or other labor trouble pending with respect to the Company (including, without limitation, any organizational drive) or, to the best of the Company's knowledge, threatened. The Schedule of Exceptions sets forth a list of all agreements between any officer of the Company and a previous employer of such person that contains non-competition or non-solicitation covenants. The Company has furnished to the Investor copies of such agreements. To the Company's knowledge, no employee of the Company is obligated under any contract or subject to any judgment, decree or administrative order that would conflict or interfere with (i) the performance of the employee's duties as an employee, director or officer of the Company, or (ii) the Company's business as conducted or proposed to be conducted.

(c) The Schedule of Exceptions sets forth (i) the annual salary, (ii) any bonus arrangements and (iii) rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock of each of the Key Employees.

2.25 ***ERISA***. Except as set forth in Section 2.25 of the Schedule of Exceptions, the Company does not have or otherwise contribute to or participate in any employee benefit plan subject to the Employee Retirement Income Security Act of 1974, as amended, other than a medical benefit plan with respect to which the Company has made all required contributions and has complied with all applicable laws.

2.26 ***Books and Records***. The minute books of the Company contain complete and accurate records of all meetings and other corporate actions of its stockholders and its Board of Directors and committees thereof. The stock ledger of the Company is complete and accurate and reflects all issuances, transfers, repurchases and cancellations of shares of capital stock of the Company.

2.27 ***Permits***. The Schedule of Exceptions sets forth a list of all material permits, licenses, registrations, certificates, orders or approvals from any Governmental Entity ("***Permits***") issued to or held by the Company. Such listed Permits are the only Permits that are required for the Company to conduct its business as presently or proposed to be conducted, except for those the absence of which would not have a Company Material Adverse Effect. Each such Permit is in full force and effect and, to the best of the Company's Knowledge, no suspension or cancellation of such Permit is threatened and there is no basis for believing that such Permit will not be renewable upon expiration

2.28 ***Environmental Matters***.

(a) The Company has complied with all applicable Environmental Laws (as defined below). There is no pending or, to the best of the Company's knowledge, threatened civil or criminal litigation, written notice of violation, formal administrative proceeding, or investigation, inquiry or information request by any Governmental Entity, relating to any Environmental Law involving the Company. For purposes of this Agreement, "***Environmental Law***" shall mean any federal, state or local law, statute, rule or regulation or the common law relating to the environment or occupational health and safety, including any statute, regulation, administrative decision or order pertaining to (i) treatment, storage, disposal, generation and transportation of industrial, toxic or hazardous materials or substances or solid or hazardous waste; (ii) air, water and noise pollution; (iii) groundwater and soil contamination; (iv) the release or threatened release into the environment of industrial, toxic or hazardous materials or substances, or solid or hazardous waste, including emissions, discharges, injections, spills, escapes or dumping of pollutants, contaminants or chemicals; (v) the protection of wildlife, marine life and wetlands, including all endangered and threatened species; (vi) storage tanks, vessels, containers, abandoned or discarded barrels and other closed receptacles; (vii) health and safety of employees and other persons; and (viii) manufacturing, processing, using, distributing, treating, storing, disposing, transporting or handling of materials regulated under any law as pollutants, contaminants, toxic or hazardous materials or substances or oil or petroleum products or solid or hazardous waste. As used above, the terms "**release**" and "**environment**" shall have the meaning set forth in the federal Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended ("***CERCLA***"), provided that the term "***release***" shall not include the definitional exclusions of CERCLA and the term "***environment***" shall not include the United States jurisdictional limitations of CERCLA and shall include the indoor environment.

(b) The Company has no liabilities or obligations arising from the release of any Materials of Environmental Concern (as defined below) into the environment. For purposes of this Agreement, "***Materials of Environmental Concern***" shall mean any chemicals, pollutants or contaminants, hazardous substances (as such term is defined under CERCLA), solid wastes and hazardous wastes (as such terms are defined under the Resource Conservation and Recovery Act), toxic materials, oil or petroleum and petroleum products or any other material subject to regulation under any Environmental Law.

(c) The Company is not a party to or bound by any court order, administrative order, consent order or other agreement between the Company and any Governmental Entity entered into in connection with any legal obligation or liability arising under any Environmental Law.

(d) The Company is not aware of any material environmental liability of any solid or hazardous waste transporter or treatment, storage or disposal facility that has been used by the Company.

(e) Set forth in the Schedule of Exceptions is a list of all documents (whether in hard copy or electronic form) that contain any environmental reports, investigations and audits relating to premises currently or previously owned or operated by the Company (whether conducted by or on behalf of the Company or a third party, and whether done at the initiative of the Company or directed by a Governmental Entity or other third party) which the Company has possession of or access to. A complete and accurate copy of each such document has been provided to the Investor.

2.29 ***Disclosure***. Neither this Agreement nor any Exhibit hereto, nor any report, certificate or instrument furnished by the Company to any of the Investor or its counsel in connection with the transactions contemplated by this Agreement, when read together, contains or will contain any untrue statement of a material fact or omits or will omit to state a material fact necessary in order to make the statements contained herein or therein, in light of the circumstances under which they were made, not misleading.

2.30 ***Bad Actors Matters***. Neither the Company nor, to the Company's knowledge, any of its officers, directors or other affiliates covered under Rule 506(d)(1) promulgated under the Securities Act (excluding for such purposes the Investor) meet any of the disqualifying criteria described in Rule 506(d)(1)(i) through (viii) promulgated under the Securities Act.

SECTION 3

Representations and Warranties of the Investor

The Investor hereby represents and warrants the following as of the date hereof and as of the Closing Date:

3.1 ***Experience***. The Investor has carefully reviewed the representations concerning the Company contained in this Agreement and has sufficient knowledge and experience in finance and business that it is capable of evaluating the risks and merits of its investment in the Company and the Investor is able financially to bear the risks thereof.

3.2 ***Investment***. The Investor is acquiring the Shares for investment for the Investor's own account and not with the view to, or for resale in connection with, any distribution thereof. The Investor understands that the Shares are being issued in a transaction that has not been and will not be registered under the Securities Act by reason of a specific exemption from the registration provisions of the Securities Act which depends upon, among other things, the bona fide nature of the investment intent as expressed herein. The Investor further represents that it does not have any contract, undertaking, agreement or arrangement with any person to sell, transfer or grant participation to any third person with respect to any of the Shares.

3.3 ***Rule 144***. The Investor acknowledges that the Shares must be held indefinitely unless subsequently registered under the Securities Act or an exemption from such registration is available. The Investor is aware of the provisions of Rule 144 promulgated under the Securities Act which permit limited resale of shares purchased in a private placement subject to the satisfaction of certain conditions. In connection therewith, the Investor acknowledges that the Company will make a notation on its stock books regarding the restrictions on transfers set forth in this Section 3 and will transfer the Shares on the books of the Company only to the extent not inconsistent therewith.

3.4 ***Access to Information***. The Investor has received and reviewed information about the Company and has had an opportunity to discuss the Company's business, management and financial affairs with its management and to review the Company's facilities. The Investor has had a full opportunity to ask questions of and receive answers from the Company, or any person or persons acting on behalf of the Company, concerning the terms and conditions of an investment in the Shares. In connection with the purchase of the Shares hereunder, the Investor is not relying upon, and has not relied upon, any statement, representation or warranty made by any person, except for the statements, representations and warranties contained in this Agreement.

3.5 ***Authorization***. The Investor has full power and authority to enter into and to perform this Agreement in accordance with its terms. The Investor represents that it has not been organized, reorganized or recapitalized specifically for the purpose of investing in the Company. This Agreement has been duly executed and delivered by the Investor and constitutes a valid and binding obligation of the Investor enforceable against the Investor in accordance with their respective terms.

3.6 ***Investor Status***. The Investor acknowledges that it is either (i) an institutional "accredited investor" as defined in Rule 501(a) of Regulation D of the Securities Act (an "***Institutional Accredited Investor***") or (ii) a "qualified institutional buyer" as defined in Rule 144A of the Securities Act, as indicated on Schedule A hereto, and the Investor shall submit to the Company such further assurances of such status as may be reasonably requested by the Company.

3.7 ***No Inducement***. The Investor was not induced to participate in the offer and sale of the Shares by the filing of any registration statement in connection with any public offering of the Company's securities, and the Investor's decision to purchase the Shares hereunder was not influenced by the information contained in any such registration statement.

SECTION 4

Conditions to Investor's Obligations at Closing

The obligations of the Investor under this Agreement are subject to the fulfillment on or before the Closing of each of the following conditions, any of which may be waived in writing by the Investor (except to the extent not permitted by law):

4.1 ***No Injunction, etc***. No preliminary or permanent injunction or other binding order, decree or ruling issued by a court or governmental agency shall be in effect which shall have the effect of preventing the consummation of the transactions contemplated by this Agreement. No action or claim shall be pending before any court or quasi-judicial or administrative agency of any federal, state, local or foreign jurisdiction or before any arbitrator wherein an unfavorable injunction, judgment, order, decree, ruling or charge would be reasonably likely to (i) prevent consummation of any of the transactions contemplated by this Agreement, (ii) cause any of the transactions contemplated by this Agreement to be rescinded following consummation or (iii) have the effect of making illegal the purchase of, or payment for, any of the Shares by the Investor.

4.2 ***Representations and Warranties***. The representations and warranties of the Company contained in Section 2 shall have been true and correct in all material respects (except for such representations and warranties that are qualified by materiality, which shall be true and correct in all respects, and for the representations and warranties contained in Section 2.6, which shall be true and correct in all respects other than de minimis exceptions) on and as of the Closing Date, with the same effect as though such representations and warranties had been made on and as of such date, except to the extent expressly made as of a specified date, which shall be true and correct as of such date.

4.3 ***Performance***. The Company shall have performed and complied with all covenants, agreements, obligations and conditions contained in this Agreement that are required to be performed or complied with by it on or before the Closing Date.

4.4 ***Restated Certificate of Incorporation; Bylaws***. The Company shall have delivered to the Investor the Restated Certificate, as in effect as of the Closing Date, certified by the Secretary of State of the State of Delaware. There shall have been no amendment to the Bylaws of the Company (however effected) on or subsequent to the Execution Date that would have required the consent of the holders of the Series E Preferred Stock under Section 3.32 of the Restated Certificate if any shares of Series E Preferred Stock had been outstanding at the time such amendment was adopted or otherwise became effective.

4.5 ***Compliance Certificate***. A duly authorized officer of the Company shall deliver to the Investor at the Closing a certificate stating that the conditions specified in Sections 4.2 and 4.3 have been fulfilled and certifying and attaching the Company's Certificate of Incorporation, Bylaws and authorizing Board of Directors resolutions with respect to this Agreement and the transactions contemplated hereby, and shall further certify that under the Restated Certificate 4,722,058 shares have been designated as Series E Preferred, none of which are issued or outstanding.

4.6 ***Securities Laws***. The offer and sale of the Shares to the Investor pursuant to this Agreement shall be exempt from the registration requirements of the Securities Act and the registration and/or qualification requirements of all applicable state securities laws.

4.7 ***Authorizations***. All authorizations, approvals or permits, if any, of any governmental authority or regulatory body that are required in connection with the lawful issuance and sale of the Shares pursuant to this Agreement shall have been duly obtained and shall be effective on and as of the Closing.

4.8 ***Legal Opinion***. The Investor shall have received a legal opinion from Cooley LLP substantially in form and substance reasonably acceptable to the Investor.

4.9 ***Effective Date***. The Effective Date (as such term is described in the that certain Collaboration and License Agreement (the "***Collaboration Agreement***"), entered into as of March 12, 2015, between the Company and Novartis Pharmaceuticals Corporation) shall have occurred.

SECTION 5

Conditions to the Company's Obligations at Closing

The obligations of the Company to the Investor under this Agreement are subject to the fulfillment on or before the Closing of each of the following conditions by the Investor:

5.1 ***Representations and Warranties***. The representations and warranties of the Investor contained in Section 3 shall be true and correct in all material respects (except for such representations and warranties that are qualified by materiality which shall be true and correct in all respects) on and as of the Closing with the same effect as though such representations and warranties had been made on and as of the Closing.

5.2 ***Securities Law Compliance***. The offer and sale of the Shares to the Investor pursuant to this Agreement shall be exempt from the registration requirements of the Securities Act and the registration and/or qualification requirements of all applicable state securities laws.

5.3 ***Authorization***. All authorizations, approvals or permits, if any, of any governmental authority or regulatory body that are required in connection with the lawful issuance and sale of the Shares pursuant to this Agreement shall have been duly obtained and shall be effective on and as of the Closing.

SECTION 6

Investor Covenants

6.1 ***Trading Restrictions***.

(a) Definitions.

(i) "***Affiliate***" shall have the meaning set forth in Rule 12b-2 of the regulations promulgated under the Securities Exchange Act of 1934, as amended (the "***Exchange Act***").

(ii) "***Restriction Period***" shall mean the period commencing on the Closing Date and continuing until (i) if an IPO (as defined below) is consummated on or prior to June 30, 2015, the earlier of (A) the two year anniversary of the IPO and (B) the date upon which the Collaboration Agreement expires or is terminated in accordance with its terms, or (ii) if an IPO is not consummated on or prior to June 30, 2015, the earlier of (A) the two year anniversary of the Closing Date and (B) the date upon which the Collaboration Agreement expires or is terminated in accordance with its terms.

(iii) "***Standstill Period***" shall mean the period commencing on the Effective Date and continuing until the earlier of (i) the two year anniversary thereof and (ii) the date upon which the Collaboration Agreement expires or is terminated in accordance with its terms.

(iv) "***Significant Event***" shall mean any of the following not involving a violation of this Section 6: (A) the public announcement of a proposal or intention to acquire, or the acquisition, by any person or 13D Group of beneficial ownership of Voting Securities representing 15% or more of the then outstanding Voting Securities, or all or substantially all of the assets of the Company; (B) the public announcement of a proposal or intention to commence, or the commencement, by any person or 13D Group of a tender or exchange offer to acquire Voting Securities which, if successful, would result in such person or 13D Group owning, when combined with any other Voting Securities owned by such person or 13D Group, 15% or more of the then outstanding Voting Securities; (C) the entry into by the Company, or the public announcement by the Company of an intention or determination to enter into or commence or continue any discussions relating to, any merger, sale or other business combination transaction, or an agreement therefor, pursuant to which the outstanding shares of capital stock of the Company would be converted into cash, other consideration or securities of another person or 13D Group or 50% or more of the then outstanding shares of capital stock of the Company would be owned by persons other than the then current holders of shares of capital stock of the Company, or which would result in all or a substantial portion of the Company's assets being sold to any person or 13D Group, or (D) entering into an agreement or commencing a proxy solicitation in which a person or 13D Group would, if successful, elect, or acquire the ability to elect, a majority of the Board of Directors of the Company.

(v) "***Voting Securities***" shall mean at any time shares of any class of capital stock of the Company which are then entitled to vote generally in the election of directors.

(vi) "***13D Group***" shall mean, with respect to the Voting Securities of the Company, any group of persons formed for the purpose of acquiring, holding, voting or disposing of such Voting Securities which would be required under Section 13(d) of the Exchange Act and the rules and regulations thereunder to file a statement on Schedule 13D with the Commission as a "person" within the meaning of Section 13(d)(3) of the Exchange Act if such group beneficially owned Voting Securities representing more than 5% of the total combined voting power of all such Voting Securities then outstanding.

(b) Restriction Period No Sell. The Investor agrees that during the Restriction Period, neither the Investor nor any of its Affiliates shall offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise dispose of in any manner, either directly or indirectly ("Sale" or "Sell"), any Shares or any securities of the Company issued as a dividend or distribution on, or involving a recapitalization or reorganization with respect to, any of the Shares ("Covenant Shares"), other than transfers of securities between and among the Investor and any one or more of its Affiliates. The Company shall use commercially reasonable efforts to permit the Shares to be eligible for clearance and settlement through the facilities of The Depository Trust Company immediately following the termination of the Restriction Period.

(c) Post-Restriction Period Selling Restrictions. During the two years following the expiration of the Restriction Period:

(i) Neither the Investor nor its Affiliates shall Sell a number of Covenant Shares in any three-month period that collectively exceeds 25% of the aggregate Covenant Shares held by the Investor and its Affiliates as of the end of the Restriction Period; and

(ii) For any proposed Sale of 100,000 or more shares of Common Stock of the Company by the Investor or any of its Affiliates in any single transaction or series of related transactions ("***Proposed Sale Shares***"), the Investor shall give the Company at least 10 days prior written notice of such sale. If the Investor provides a notice as provided in the preceding sentence, during such 10-day period, the Company may seek to find a buyer for the Proposed Sale Shares. The limitations and obligations set forth in this Section 6.1(c) shall not apply to any Sale of Covenant Shares taking place between the Investor (and/or any of its Affiliates) and a single buyer; provided that the Investor shall give the Company at least 30 days prior written notice of such Sale.

This Section 6.1(c) shall terminate one year after the expiration or termination of the Collaboration Agreement in accordance with its terms, if such termination occurs prior to the one year anniversary of the expiration of the Restriction Period.

(d) Standstill. The Investor agrees that during the Standstill Period, neither the Investor nor any of its Affiliates shall:

(i) make any statement or proposal to the board of directors of any of the Company, any of the Company's representatives or any of the Company's stockholders regarding, or make any public announcement, proposal or offer (including any "solicitation" of "proxies" as such terms are defined or used in Regulation 14A of the Exchange Act) with respect to, or otherwise solicit, seek or offer to effect (including, for the avoidance of doubt, indirectly by means of communication with the press or media) (i) any business combination, merger, tender offer, exchange offer or similar transaction involving the Company or any of its subsidiaries, (ii) any restructuring, recapitalization, liquidation or similar transaction involving the Company or any of its subsidiaries, (iii) any acquisition of any of the Company's loans, debt securities, equity securities or all or substantially all of the Company's assets, or rights or options to acquire interests in any of the foregoing, (iv) any proposal to seek representation on the board of directors of the Company or otherwise seek to control or influence the management, board of directors or policies of any of the Company or (v) any request or proposal to waive, terminate or amend the provisions of this Section 6.1(d) or (vi) any proposal, arrangement or other statement that is inconsistent with the terms of this Section 6.1(d);

(ii) instigate, encourage or assist any third party (including forming a "group," as defined in the Exchange Act, with any such third party) to do, or enter into any discussions or agreements with any third party with respect to, any of the actions set forth in clause (i) above;

(iii) take any action which would reasonably be expected to require the Company or any of its affiliates to make a public announcement regarding any of the actions set forth in clause (i) above; or

(iv) acquire (or propose or agree to acquire), of record or beneficially, by purchase or otherwise, any loans, equity securities or all or substantially all of the assets of the Company or any of its subsidiaries, or rights or options to acquire interests in any of the foregoing.

Notwithstanding the foregoing, this Section 6.1(d) shall not prohibit the Investor and any of its Affiliates from privately discussing any potential transaction with the Company, or from acquiring and beneficially owning up to ten percent (10%) of the Company's outstanding equity securities (and the Investor and its Affiliates may own an amount in excess of such percentage solely to the extent exclusively resulting from actions taken or permitted by the Company following the acquisition by the Investor and/or its Affiliates of the Company's equity securities, including as a result of a repurchase by the Company of equity securities, any stock split, stock dividend or a recapitalization of the Company).

(e) Occurrence of Significant Event. The restrictions contained in Sections 6.1(b), 6.1(c) and 6.1(d) shall be suspended and shall not apply to or otherwise restrict the Investor's actions in respect of the Company's securities for so long as a Significant Event has occurred and is continuing.

6.2 ***Invalid Transfers.*** Any sale, assignment or other transfer of Covenant Shares by the Investor or any of its Affiliates, as applicable, contrary to the provisions of this Section 6 shall be null and void, and the transferee shall not be recognized by the Company as the holder or owner of the Covenant Shares sold, assigned, or transferred for any purpose (including, without limitation, voting or dividend rights), unless and until the Investor or such Affiliate, as applicable, has satisfied the requirements of this Section 6 with respect to such sale. The Company, or, at the instruction of the Company, the transfer agent of the Company, may place a legend on any certificate representing Covenant Shares stating that such shares are subject to the restrictions contained in this Agreement. Upon expiration of the Restriction Period, the Company agrees to facilitate the timely preparation and delivery (but in no event longer than three (3) business days) of certificates representing the Covenant Shares to be sold by the Investor or any Affiliate free of any restrictive legends and in such denominations and registered in such names as the Investor or such Affiliate may request in connection with such sale.

6.3 ***Performance by Affiliates.*** The Investor shall remain responsible for and guarantee its Affiliates' performance in connection with this Agreement, and shall cause each such Affiliate to comply fully with the provisions of this Agreement in connection with such performance. The

Investor hereby expressly waives any requirement that the Company exhaust any right, power or remedy, or proceed directly against such an Affiliate, for any obligation or performance hereunder, prior to proceeding directly, against the Investor.

6.4 ***Voting Agreement.*** The Investor agrees to be bound by and comply with the terms of that certain Amended and Restated Voting Agreement, dated as of December 19, 2014, among the Company, the Purchasers listed on Exhibit A thereto and the Key Holders listed on Exhibit B thereto (the "***Voting Agreement***") as a "Purchaser," and the Shares shall be deemed "Shares" under the Voting Agreement, the terms of which are incorporated herein mutatis mutandis.

SECTION 7

Registration Rights

7.1 ***Rule 144 Reporting.*** With a view to making available to the Investor the benefits of certain rules and regulations of the Commission which may permit the sale of the Shares to the public without registration, the Company agrees to use commercially reasonable efforts to:

(a) Make and keep public information available, as those terms are understood and defined in Rule 144 promulgated under the Securities Act;

(b) File with the Commission in a timely manner all reports and other documents required of the Company under the Exchange Act; and

(c) Furnish the Investor forthwith upon request (i) a written statement by the Company as to its compliance with the public information requirements of said Rule 144, (ii) a copy of the most recent annual or quarterly report of the Company, and (iii) such other reports and documents as may be reasonably requested in availing the Investor of any rule or regulation of the Commission permitting the sale of any such securities without registration.

7.2 ***Registration.***

(a) If, at the end of the Restriction Period, the Shares cannot be sold without restriction pursuant to Rule 144 promulgated under the Securities Act, then upon Investor's written request, received by the Company on or before the 30th day after the end of the Restriction Period, the Company will use commercially reasonable efforts to register the Shares for resale under the Securities Act on a Registration Statement on Form S-3 (the "***Registration Statement***"), filed within 90 days of such written request, and will use commercially reasonable efforts to have such Registration Statement promptly declared effective by the Commission.

(b) The Company will use commercially reasonable efforts to keep the Registration Statement continuously effective under the Securities Act until the earlier of (i) the date all of the Shares covered by such Registration Statement have been sold or can be sold publicly without restriction or limitation under Rule 144 or (ii) the date that is two years following the Closing Date.

(c) The Investor shall furnish to the Company such information regarding the Investor, and the distribution proposed by the Investor, as the Company may reasonably request in writing and as shall be required in connection with the Registration Statement.

(d) The Company shall pay all fees and expenses incident to the performance of or compliance with this Section 7.2 by the Company.

7.3 ***Restrictive Legend.***

(a) The certificates representing the Shares, when issued, will bear a restrictive legend in substantially the following form:

"THE SECURITIES EVIDENCED OR CONSTITUTED HEREBY HAVE BEEN ISSUED WITHOUT REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT") AND MAY NOT BE SOLD, OFFERED FOR SALE, TRANSFERRED, PLEDGED OR HYPOTHECATED WITHOUT REGISTRATION UNDER THE ACT UNLESS EITHER (i) THE COMPANY HAS RECEIVED AN OPINION OF COUNSEL, IN FORM AND SUBSTANCE REASONABLY SATISFACTORY TO THE COMPANY, TO THE EFFECT THAT REGISTRATION IS NOT REQUIRED IN CONNECTION WITH SUCH DISPOSITION OR (ii) THE SALE OF SUCH SECURITIES IS MADE PURSUANT TO RULE 144 PROMULGATED UNDER THE ACT."

(b) The certificates representing the Shares, when issued, shall not bear the restrictive legend set forth in Section 7.3(a): (i) following a sale of such Shares pursuant to a registration statement covering the resale of such Shares, while such registration statement is effective under the Securities Act, (ii) following any sale of such Shares pursuant to Rule 144 promulgated under the Securities Act ("***Rule 144***"), (iii) if such Shares are eligible for sale under Rule 144, without the requirement for the Company to be in compliance with the current public information required under Rule 144 as to such Shares and without volume or manner-of-sale restrictions or (iv) if such legend is not required under applicable requirements of the Securities Act (including judicial interpretations and pronouncements issued by the staff of the Securities and Exchange Commission). The Company agrees that at such time as the restrictive legend set forth in Section 7.3(a) is no longer required under this section, the Company will (x) no later than five (5) business days following the delivery by the Investor to the Company or the Company's transfer agent of a certificate representing Shares issued with such restrictive legend, deliver or cause to be delivered to the Investor a certificate representing such Shares that is free from such restrictive legend, and (y), in the event that such shares are uncertificated, no later than five (5) business days following the delivery of a written request by the Investor to the Company to remove such restrictive legend, remove, or cause to be removed, any such restrictive legend in the Company's stock records. The Company may not make any notation on its records or give instructions to the Company's transfer agent that enlarge the restrictions on transfer set forth in Sections 6.2, 7.3(a) and 7.4.

7.4 ***"Lock-Up" Agreement; Confidentiality of Notices.*** The Investor agrees, if requested by the Company and the managing underwriter of an underwritten initial public offering of the Company's Common Stock (an "***IPO***") (but not for any subsequent offerings) (i) not to (a) offer, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to

purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any Shares or other securities of the Company (excluding securities acquired in the public market after the IPO) or (b) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of any Shares or other securities of the Company (excluding securities acquired in the public market after the IPO), whether any transaction described in clause (a) or (b) is to be settled by delivery of securities, in cash or otherwise, during the period beginning on the date of the filing of such registration statement with the Securities and Exchange Commission and ending on the date specified by the Company and the managing underwriter (such period not to exceed 180 days in the case of an IPO or such other period not to exceed 18 days after the expiration of the 180-day period, as may be requested by the Company or an underwriter to accommodate regulatory restrictions on (1) the publication or other distribution of research reports, and (2) analyst recommendations and opinions, including, but not limited to, the restrictions contained in FINRA Rule 2711(f)(4) or NYSE Rule 472(f)(4), or any successor provisions or amendments thereto), and (ii) to execute any agreement reflecting clause (i) above as may be requested by the Company or the managing underwriters at the time of such offering.

The Company may impose stop-transfer instructions with respect to the Registrable Shares or other securities subject to the foregoing restriction until the end of such "lock-up" period.

As a condition to the obligation of the Investor under this Section 7.4, any "lock-up" obligation of the Investor under this Section 7.4, and any agreement entered into by the Investor as a result of its obligations under this Section 7.4, shall allow for periodic early releases of portions of the securities subject to such "lock-up" obligations, which may be conditioned upon the trading price of the Company's Common Stock.

If the Investor receives any written notice from the Company regarding the Company's plans to file a Registration Statement, the Investor shall treat such notice confidentially and shall not disclose such information to any person other than as necessary to exercise its rights under this Agreement.

SECTION 8

Indemnification

Each party (an "***Indemnifying Party***") hereby indemnifies and holds harmless the other party, such other party's respective officers, directors, employees, consultants, representatives and advisers, and any and all Affiliates (as defined in Section 6.1(a)) of the foregoing (each of the foregoing, an "***Indemnified Party***") from and against all losses, liabilities, costs, damages and expense (including reasonable legal fees and expenses) (collectively, "***Losses***") suffered or incurred by any such Indemnified Party to the extent arising from, connected with or related to (i) breach of any representation or warranty of such Indemnifying Party in this Agreement; and (ii) breach of any covenant or undertaking of any Indemnifying Party in this Agreement. If an event or omission (including, without limitation, any claim asserted or action or proceeding commenced by a third party) occurs which an Indemnified Party asserts to be an indemnifiable event pursuant to this Section 8, the Indemnified Party will provide written notice to the Indemnifying Party, setting forth the nature of the claim and the basis for indemnification under this Agreement. The Indemnified

Party will give such written notice to the Indemnifying Party immediately after it becomes aware of the existence of any such event or occurrence. Such notice will be a condition precedent to any obligation of the Indemnifying Party to act under this Agreement but will not relieve it of its obligations under the indemnity except to the extent that the failure to provide prompt notice as provided in this Agreement prejudices the Indemnifying Party with respect to the transactions contemplated by this Agreement and to the defense of the liability. In case any such action is brought by a third party against any Indemnified Party and it notifies the Indemnifying Party of the commencement thereof, the Indemnifying Party will be entitled to participate therein and, to the extent that it wishes, to assume the defense and settlement thereof with counsel reasonably selected by it and, after notice from the Indemnifying Party to the Indemnified Party of such election so to assume the defense and settlement thereof, the Indemnifying Party will not be liable to the Indemnified Party for any legal expenses of other counsel or any other expenses subsequently incurred by such Indemnified Party in connection with the defense thereof, provided, however, that an Indemnified Party shall have the right to employ separate counsel at the expense of the Indemnifying Party if (i) the employment thereof has been specifically authorized in writing by the Indemnifying Party; or (ii) representation of both parties by the same counsel would be inappropriate due to actual or potential conflicts of interests between such parties (which such judgment shall be made in good faith after consultation with counsel). The Indemnified Party agrees to cooperate fully with (and to provide all relevant documents and records and make all relevant personnel available to) the Indemnifying Party and its counsel, as reasonably requested, in the defense of any such asserted claim at no additional cost to the Indemnifying Party. No Indemnifying Party will consent to the entry of any judgment or enter into any settlement with respect to any such asserted claim without the prior written consent of the Indemnified Party, not to be unreasonably withheld or delayed, (a) if such judgment or settlement does not include as an unconditional term thereof the giving by each claimant or plaintiff to each Indemnified Party of a release from all liability in respect to such claim or (b) if, as a result of such consent or settlement, injunctive or other equitable relief would be imposed against the Indemnified Party or such judgment or settlement could materially and adversely affect the business, operations or assets of the Indemnified Party. No Indemnified Party will consent to the entry of any judgment or enter into any settlement with respect to any such asserted claim without the prior written consent of the Indemnifying Party, not to be unreasonably withheld or delayed. If an Indemnifying Party makes a payment with respect to any claim under the representations or warranties set forth herein and the Indemnified Party subsequently receives from a third party or under the terms of any insurance policy a sum in respect of the same claim, the receiving party will repay to the other party such amount that is equal to the sum subsequently received.

SECTION 9

Miscellaneous

9.1 ***Information and Other Rights***.

(a) For so long as the Investor continues to hold at least 2,250,000 shares of Series E Preferred and/or Common Stock, and until the earlier of the closing of a Company Sale or a Qualified IPO (each as defined in the Amended and Restated Investor Rights Agreement, dated as of December 19, 2014, among the Company and the individuals and entities listed on Exhibit A thereto (the "***Investor Rights Agreement***"), the Company shall provide the Investor with the information set forth in Sections 4.4(a)(i), (ii) and (iv) of the Investor Rights Agreement, the terms of which are incorporated herein *mutatis mutandis*.

(b) For so long as the Investor continues to hold any shares of Series E Preferred, and until the earlier of the closing of a Company Sale or a Qualified IPO, the Company hereby makes the covenants and agreements set forth in Section 4.2 of the Investor Rights Agreement, the terms of which are incorporated herein *mutatis mutandis*.

(c) For so long as the Investor continues to hold any shares of Series E Preferred or Common Stock issuable upon the conversion thereof, and until the earlier of the closing of a Company Sale or a Qualified IPO, the Company hereby makes the covenants and agreements set forth in Sections 4.5, 4.6, 4.7, 4.9, 4.10 and 4.11 of the Investor Rights Agreement, the terms of which are incorporated herein *mutatis mutandis*.

9.2 ***Governing Law***. This Agreement shall be governed in all respects by the laws of the State of Delaware (without reference to the conflicts of law provisions thereof).

9.3 ***Survival***. The representations, warranties, covenants and agreements made herein shall survive any investigation made by the Investor and the Closing.

9.4 ***Successors, Assigns***. Except as otherwise provided herein, the provisions hereof shall inure to the benefit of, and be binding upon, the successors, assigns, heirs, executors and administrators of the parties hereto. This Agreement may not be assigned by either party without the prior written consent of the other; except that either party may assign this Agreement to an Affiliate (as defined in Section 6.1(a)) of such party or to any third party that acquires all or substantially all of such party's business, whether by merger, sale of assets or otherwise.

9.5 ***Notices***. All notices and other communications required or permitted hereunder shall be in writing and shall be sent by facsimile (receipt confirmed) or mailed by registered or certified mail, postage prepaid, return receipt requested, or otherwise delivered by hand or by messenger, addressed

if to the Investor, at the following address:

Novartis Institutes for BioMedical Research, Inc.
250 Massachusetts Avenue
Cambridge, MA 02139
Attention: General Counsel
Facsimile: (617) 871-5786

with a copy (which shall not constitute notice) to:

Kaye Scholer LLP
250 West 55th Street
New York, New York 10019-9710
Attention: Thomas Yadlon
Facsimile: (212) 836-6567

if to the Company, at the following address:

Aduro Biotech, Inc.
626 Bancroft Way #3C
Berkeley, CA 94710
Attention: President
Facsimile: (510) 848-5614

with a copy (which shall not constitute notice) to:

Cooley LLP
3175 Hanover Street
Palo Alto, California 94304
Attention: Michael Tenta
Facsimile: (560) 849-7400

or at such other address as one party shall have furnished to the other party in writing. If notice is provided by facsimile, it shall be deemed to be given one (1) business day after transmission (with receipt of appropriate confirmation). If notice is provided by U.S. mail, notice shall be deemed to be given four (4) days after proper deposit in a U.S. mailbox, postage prepaid, and properly addressed. If notice is provided by a messenger service that guarantees "next business day" delivery, it shall be deemed effective one (1) business day after deposit with such messenger service.

9.6 ***Expenses***. Each of the Company and the Investor shall bear its own expenses and legal fees incurred on its behalf with respect to this Agreement and the transactions contemplated hereby.

9.7 ***Confidentiality***.

(a) Subject to the other provisions of this Section 9.7, the existence of this Agreement and the terms and conditions of this Agreement (collectively, the "***Confidential Information***") will be maintained in confidence and otherwise safeguarded by the parties to this Agreement. Subject to the other provisions of this Section 9.7, each party shall hold as confidential such Confidential Information in the same manner and with the same protection as such party maintains its own confidential information. Subject to the other provisions of this Section 9.7, a party may only disclose Confidential Information to its employees, representatives, agents, sublicensees, subcontractors, consultants and advisers and its affiliates to the extent reasonably necessary for the purposes of, and for those matters undertaken pursuant to, this Agreement; provided that such persons are bound to maintain the confidentiality of the Confidential Information in a manner consistent with the confidentiality provisions of this Agreement.

(b) The obligations under this Section 9.7 shall not apply to any information to the extent the disclosing party can demonstrate by competent evidence that such information is (at the time of disclosure) or becomes (after the time of disclosure) known to the public or part of the public domain through no breach of this Agreement by such party or its affiliates.

(c) In addition to disclosures allowed under Section 9.7(b), each party may disclose Confidential Information solely to the extent such disclosure is necessary in the following instances: (i) complying with applicable law, court orders or governmental regulations, including rules of self-regulatory organizations and Securities and Exchange Commission filing and disclosure requirements or (ii) to potential or actual investors or acquirers as may be necessary in connection with their evaluation of a potential or actual investment or acquisition; provided that such persons shall be subject to obligations of confidentiality and non-use at least as protective as those set forth in this Section 9.7.

(d) In the event a party is required to disclose Confidential Information by law, applicable court order or governmental regulation or in connection with bona fide legal process, such disclosure shall not be a breach of this Agreement; provided that such party (i) informs the other party as soon as reasonably practicable of the required disclosure; (ii) limits the disclosure to that which is legally required to be disclosed; and (iii) at the other party's request and expense, assists in an attempt to object to or limit the required disclosure.

(e) Either party may disclose the existence and terms of this Agreement in confidence to its attorneys and advisors, and to potential acquirers (and their respective professional attorneys and advisors), in connection with a potential merger, acquisition or reorganization and to existing and potential investors or lenders of such party, as part of their due diligence investigations, or to existing and potential licensees or sublicensees or to permitted assignees, in each case under an agreement to keep the terms of confidentiality and non-use substantially no less rigorous than the terms contained in this Agreement and to use such information solely for the purpose permitted pursuant to this Section 9.7(e).

9.8 ***Finder's Fees***. Each of the Company and the Investor shall indemnify and hold the other harmless from any liability for any commission or compensation in the nature of a finder's fee, placement fee or underwriter's discount (including the costs, expenses and legal fees of defending against such liability) for which the Company or the Investor, or any of its respective partners, employees, or representatives, as the case may be, is responsible.

9.9 ***Counterparts***. This Agreement may be executed in counterparts, each of which shall be enforceable against the party actually executing the counterpart, and all of which together shall constitute one instrument.

9.10 ***Severability***. In the event that any provision of this Agreement becomes or is declared by a court of competent jurisdiction to be illegal, unenforceable or void, this Agreement shall continue in full force and effect without said provision; provided that no such severability shall be effective if it materially changes the economic benefit of this Agreement to any party.

9.11 ***Entire Agreement***. This Agreement, including the exhibits and schedule attached hereto, constitute the full and entire understanding and agreement among the parties with regard to the subjects hereof and thereof. No party shall be liable or bound to any other party in any manner with regard to the subjects hereof or thereof by any warranties, representations or covenants except as specifically set forth herein or therein.

9.12 ***Waiver***. The failure of either party to assert a right hereunder or to insist upon compliance with any term or condition of this Agreement shall not constitute a waiver of that right or excuse a similar subsequent failure to perform any such term or condition by the other party. None of the terms, covenants and conditions of this Agreement can be waived except by the written consent of the party waiving compliance.

9.13 ***Termination***. This Agreement shall terminate automatically if the Collaboration Agreement is terminated pursuant to its terms prior to the consummation of the Closing.

[This space left intentionally blank. Signature page follows.]

IN WITNESS WHEREOF, the parties have executed this Preferred Stock Purchase Agreement as of the date first set forth above.

COMPANY:

ADURO BIOTECH, INC.

By: /s/ Stephen T. Isaacs
Stephen T. Isaacs
President and Chief Executive Officer

SIGNATURE PAGE TO ADURO BIOTECH, INC.
PREFERRED STOCK PURCHASE AGREEMENT

IN WITNESS WHEREOF, the parties have executed this Preferred Stock Purchase Agreement as of the date first set forth above.

INVESTOR:

NOVARTIS INSTITUTES FOR
BIOMEDICAL RESEARCH, INC.

By: /s/ Scott A. Brown
Scott A. Brown
VP, General Counsel

SIGNATURE PAGE TO ADURO BIOTECH, INC.
PREFERRED STOCK PURCHASE AGREEMENT

Schedule A

The Investor is an institutional “accredited investor” as defined in Rule 501(a) of Regulation D of the Securities Act.

EXHIBIT A

Amended and Restated Certificate of Incorporation

AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
OF
ADURO BIOTECH, INC.

Aduro Biotech, Inc. (the "**Corporation**"), a corporation organized and existing under the General Corporation Law of the State of Delaware (the "**General Corporation Law**"), by its duly authorized officer, does hereby certify that:

1. The original name of the Corporation was Aduro BioTech, Inc. and the date of filing of the original Certificate of Incorporation of the Corporation with the Secretary of State of the State of Delaware was May 5, 2011.

2. Pursuant to the applicable provisions of Sections 228, 242 and 245 of the General Corporation Law, this Amended and Restated Certificate of Incorporation was adopted by the Corporation's Board of Directors and stockholders.

FIRST: The name of the Corporation is Aduro Biotech, Inc.

SECOND: The address of the registered office of the Corporation in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County of New Castle, Delaware 19801. The name of its registered agent at such address is The Corporation Trust Company.

THIRD: The nature of the business or purposes to be conducted or promoted is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law.

FOURTH: The total number of shares of all classes of stock which the Corporation shall have authority to issue is (i) 90,000,000 shares of Common Stock, $0.0001 par value per share ("**Common Stock**"), and (ii) 74,438,403 shares of Preferred Stock, $0.0001 par value per share ("**Preferred Stock**"), of which 161,843 have been designated as Series A Preferred Stock (the "**Series A Preferred Stock**"), 3,393,666 have been designated as Series A-1 Preferred Stock (the "**Series A-1 Preferred Stock**"), 21,525,480 have been designated as Series B Preferred Stock (the "**Series B Preferred Stock**"), 25,623,183 have been designated as Series C Preferred Stock (the "**Series C Preferred Stock**"), 19,012,173 have been designated as Series D Preferred Stock (the "**Series D Preferred Stock**"), and 4,722,058 have been designated as Series E Preferred Stock (the "**Series E Preferred Stock**").

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A. COMMON STOCK

1. General. The voting, dividend and liquidation rights of the holders of the Common Stock are subject to and qualified by the rights, powers and preferences of the holders of the Preferred Stock set forth herein.

2. Voting. The holders of the Common Stock are entitled to one vote for each share of Common Stock held at all meetings of stockholders (and written actions in lieu of meetings); provided, however, that, except as otherwise required by law, holders of Common Stock, as such, shall not be entitled to vote on any amendment to the Amended and Restated Certificate of Incorporation (the "**Certificate of Incorporation**") that relates solely to the terms of one or more outstanding series of Preferred Stock if the holders of such affected series are entitled, either separately or together with the holders of one or more other such series, to vote thereon pursuant to the Certificate of Incorporation or pursuant to the General Corporation Law. There shall be no cumulative voting. The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by (in addition to any vote of the holders of one or more series of Preferred Stock that may be required by the terms of the Certificate of Incorporation) the affirmative vote of the holders of shares of capital stock of the Corporation representing a majority of the votes represented by all outstanding shares of capital stock of the Corporation entitled to vote, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law.

B. PREFERRED STOCK

Unless otherwise indicated, references to "Sections" or "Subsections" in this Part B of this Article Fourth refer to sections and subsections of Part B of this Article Fourth.

1. Dividends.

1.1 Senior Preferred. In any calendar year, the holders of outstanding shares of Series B Preferred Stock, Series C Preferred Stock, Series D Preferred Stock and Series E Preferred Stock (collectively, the "**Senior Preferred**") shall be entitled to receive dividends, when, as and if declared by the Board of Directors, out of any assets at the time legally available therefor, at a rate of eight percent (8%) of the Series B Original Issue Price (as defined below), Series C Original Issue Price (as defined below), Series D Original Issue Price (as defined below) or Series E Original Issue Price (as defined below), as the case may be, payable in preference and priority to any declaration or payment of any dividend or distribution on Series A Preferred Stock, Series A-1 Preferred Stock (collectively, the "**Junior Preferred**") and Common Stock of the Corporation in such calendar year. Such dividends shall not accrue and shall not cumulate. The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than dividends on shares of Common Stock payable in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in the Certificate of Incorporation) the holders of the Series B Preferred Stock, Series C Preferred Stock, Series D Preferred Stock and Series E Preferred Stock then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of Series B Preferred Stock in an amount at least equal to eight percent (8%) of the Series B Original Issue Price, on each outstanding share of Series C Preferred Stock in an amount at least equal to eight percent (8%) of the Series C Original Issue Price, on each outstanding share of Series D Preferred Stock in an amount at least equal to eight percent (8%) of the Series D Original Issue Price and on each outstanding share of Series E Preferred Stock in an amount at least equal to eight percent (8%) of the Series E Original Issue Price. The "**Series B Original Issue Price**" shall mean $1.1937322 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the

Series B Preferred Stock. The "**Series C Original Issue Price**" shall mean $2.17 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series C Preferred Stock. The "**Series D Original Issue Price**" shall mean $2.7029 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series D Preferred Stock. The "**Series E Original Issue Price**" shall mean $10.5886 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series E Preferred Stock.

1.2 Junior Preferred. After payment of all such preferential dividends to the holders of shares of Senior Preferred, the holders of outstanding shares of Junior Preferred shall be entitled to receive dividends, when, as and if declared by the Board of Directors, out of any assets at the time legally available therefor, at a rate of five percent (5%) of the Series A Original Issue Price or Series A-1 Original Issue Price, as the case may be (each, as defined below) payable in preference and priority to any declaration or payment of any dividend or distribution on Common Stock of the Corporation in such calendar year. Such dividends shall not accrue and shall not cumulate. The Corporation shall not declare, pay or set aside any dividends on shares of any other class or series of capital stock of the Corporation (other than the Senior Preferred as set forth above and dividends on shares of Common Stock payable in shares of Common Stock) unless (in addition to the obtaining of any consents required elsewhere in the Certificate of Incorporation) the holders of the Junior Preferred then outstanding shall first receive, or simultaneously receive, a dividend on each outstanding share of Junior Preferred in an amount at least equal to five percent (5%) of the Series A Original Issue Price or Series A-1 Original Issue Price, as the case may be. The "**Series A-1 Original Issue Price**" shall mean $1.36 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A-1 Preferred Stock. The "**Series A Original Issue Price**" shall mean $50.00 per share, subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series A Preferred Stock.

1.3 Other Dividends. After payment of all such preferential dividends to the holders of shares of Senior Preferred and Junior Preferred, any additional dividends paid by the Corporation shall be shared and distributed among the holders of Senior Preferred and Common Stock pro rata based on the number of shares of Common Stock then held by each holder (assuming conversion of all such shares of Senior Preferred into Common Stock), calculated on the record date for determination of holders entitled to receive such dividends.

2. Liquidation, Dissolution or Winding Up; Certain Mergers, Consolidations and Asset Sales.

2.1 Preferential Payments to Holders of Preferred Stock.

2.1.1 In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation (including a Deemed Liquidation Event, as defined below), the holders of shares of Senior Preferred then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders before any payment shall be made to the holders of Junior Preferred or Common Stock by reason of their ownership

thereof, an amount per share equal to the Series B Original Issue Price, Series C Original Issue Price, Series D Original Issue Price or Series E Original Issue Price, as the case may be, plus any dividends declared but unpaid thereon. If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Senior Preferred the full amount to which they shall be entitled under this Subsection 2.1.1, the holders of shares of Senior Preferred shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.1.2 In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation (including a Deemed Liquidation Event), after the payment in full of all preferential amounts required to be paid to the holders of shares of Senior Preferred, the holders of shares of Junior Preferred then outstanding shall be entitled to be paid out of the assets of the Corporation available for distribution to its stockholders before any payment shall be made to the holders of Common Stock by reason of their ownership thereof, an amount per share equal to the Series A-1 Original Issue Price or Series A Original Issue Price, as the case may be, plus any dividends declared but unpaid thereon. If upon any such liquidation, dissolution or winding up of the Corporation or Deemed Liquidation Event, the assets of the Corporation available for distribution to its stockholders shall be insufficient to pay the holders of shares of Junior Preferred the full amount to which they shall be entitled under this Subsection 2.1.2, the holders of shares of Junior Preferred shall share ratably in any distribution of the assets available for distribution in proportion to the respective amounts which would otherwise be payable in respect of the shares held by them upon such distribution if all amounts payable on or with respect to such shares were paid in full.

2.2 Distribution of Remaining Assets. In the event of any voluntary or involuntary liquidation, dissolution or winding up of the Corporation (including a Deemed Liquidation Event), after the payment of all preferential amounts required to be paid to the holders of shares of Senior Preferred and Junior Preferred, the remaining assets of the Corporation available for distribution to its stockholders shall be distributed among the holders of the shares of Senior Preferred and Common Stock, pro rata based on the number of shares held by each such holder, treating for this purpose all such securities as if they had been converted to Common Stock pursuant to the terms of the Certificate of Incorporation immediately prior to such dissolution, liquidation or winding up of the Corporation or Deemed Liquidation Event. The aggregate amount which a holder of a share of Senior Preferred is entitled to receive under Sections 2.1 and 2.2 is hereinafter referred to as the "**Senior Preferred Liquidation Amount**." The aggregate amount which a holder of a share of Junior Preferred is entitled to receive under Section 2.1 is hereinafter referred to as the "**Junior Preferred Liquidation Amount**."

2.3 Deemed Liquidation Events.

2.3.1 Definition. Each of the following events shall be considered a "**Deemed Liquidation Event**" unless the holders of (1) a majority of the outstanding shares of Series B Preferred Stock and (2) at least a majority of the outstanding shares of Series C

Preferred Stock and Series D Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, elect otherwise by written notice sent to the Corporation at least ten days prior to the effective date of any such event:

(a) a merger or consolidation in which:

(i) the Corporation is a constituent party; or

(ii) a subsidiary of the Corporation is a constituent party and the Corporation issues shares of its capital stock pursuant to such merger or consolidation;

except any such merger or consolidation involving the Corporation or a subsidiary in which the shares of capital stock of the Corporation outstanding immediately prior to such merger or consolidation continue to represent, or are converted into or exchanged for shares of capital stock that represent, immediately following such merger or consolidation, a majority, by voting power, of the capital stock of (1) the surviving or resulting corporation or (2) if the surviving or resulting corporation is a wholly owned subsidiary of another corporation immediately following such merger or consolidation, the parent corporation of such surviving or resulting corporation (provided that, for the purpose of this Subsection 2.3.1, all shares of Common Stock issuable upon exercise of Options (as defined below) outstanding immediately prior to such merger or consolidation or upon conversion of Convertible Securities (as defined below) outstanding immediately prior to such merger or consolidation shall be deemed to be outstanding immediately prior to such merger or consolidation and, if applicable, converted or exchanged in such merger or consolidation on the same terms as the actual outstanding shares of Common Stock are converted or exchanged); or

(b) the sale, lease, transfer, exclusive license or other disposition, in a single transaction or series of related transactions, by the Corporation or any subsidiary of the Corporation of all or substantially all the assets of the Corporation and its subsidiaries taken as a whole, or the sale or disposition (whether by merger or otherwise) of one or more subsidiaries of the Corporation if substantially all of the assets of the Corporation and its subsidiaries taken as a whole are held by such subsidiary or subsidiaries, except where such sale, lease, transfer, exclusive license or other disposition is to a wholly owned subsidiary of the Corporation.

2.3.2 Effecting a Deemed Liquidation Event.

(a) The Corporation shall not have the power to effect a Deemed Liquidation Event referred to in Subsection 2.3.1(a)(i) unless the agreement or plan of merger or consolidation for such transaction (the "**Merger Agreement**") provides that the consideration payable to the stockholders of the Corporation shall be allocated among the holders of capital stock of the Corporation in accordance with Sections 2.1 and 2.2.

(b) In the event of a Deemed Liquidation Event referred to in Subsection 2.3.1(a)(ii) or 2.3.1(b), if the Corporation does not effect a dissolution of the Corporation under the General Corporation Law within 90 days after such Deemed Liquidation Event, then (i) the Corporation shall send a written notice to each holder of Senior Preferred and

Junior Preferred no later than the 90th day after the Deemed Liquidation Event advising such holders of their right (and the requirements to be met to secure such right) pursuant to the terms of the following clause (ii) to require the redemption of such shares of Senior Preferred or Junior Preferred, as the case may be, and (ii) if the holders of (1) a majority of the then outstanding shares of Series B Preferred Stock and (2) at least a majority of the then outstanding shares of Series C Preferred Stock and Series D Preferred Stock, voting together as a single class on an as converted to Common Stock basis, so request in a written instrument delivered to the Corporation not later than 120 days after such Deemed Liquidation Event, the Corporation shall use the consideration received by the Corporation for such Deemed Liquidation Event (net of any retained liabilities associated with the assets sold or technology licensed, as determined in good faith by the Board of Directors of the Corporation), together with any other assets of the Corporation available for distribution to its stockholders (the "**Available Proceeds**"), to the extent legally available therefor, on the 150th day after such Deemed Liquidation Event (the "**Redemption Date**"), to redeem all outstanding shares of Senior Preferred and Junior Preferred at a price per share equal to the Senior Preferred Liquidation Amount or Junior Preferred Liquidation Amount, as the case may be. Notwithstanding the foregoing, in the event of a redemption pursuant to the preceding sentence, if the Available Proceeds are not sufficient to redeem all outstanding shares of Senior Preferred or Junior Preferred, as the case may be, the Corporation (A) shall first redeem a pro rata portion of each holder's shares of Senior Preferred based on the respective amounts which would otherwise be payable in respect of the shares to be redeemed if the Available Proceeds were sufficient to redeem all such shares and shall redeem the remaining shares to have been redeemed as soon as practicable after the Corporation has funds legally available therefor, and (B) shall redeem the remaining shares of Senior Preferred to have been redeemed as soon as practicable after the Corporation has funds legally available therefor and second, after all shares of Senior Preferred have been redeemed, shall redeem the Junior Preferred to the fullest extent of such Available Proceeds, based on the respective amounts which would otherwise be payable in respect of the shares to be redeemed if the Available Proceeds were sufficient to redeem all such shares and shall redeem the remaining shares to have been redeemed as soon as practicable after the Corporation has funds legally available therefor.

On or before the Redemption Date, each holder of shares of Senior Preferred and Junior Preferred to be redeemed on such Redemption Date, unless such holder has exercised his, her or its right to convert such shares as provided in Section 4, shall surrender the certificate or certificates representing such shares (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation, in the manner and at the place designated in the Corporation's notice, and thereupon the Senior Preferred Liquidation Amount and Junior Preferred Liquidation Amount, as the case may be, for such shares shall be payable to the order of the person whose name appears on such certificate or certificates as the owner thereof.

If on the applicable Redemption Date the redemption price payable upon redemption of the shares of Senior Preferred and Junior Preferred to be redeemed on the Redemption Date is paid or tendered for payment or deposited with an independent payment agent so as to be available therefor, then notwithstanding that the certificates evidencing any of the shares of

Senior Preferred or Junior Preferred so called for redemption shall not have been surrendered, all rights with respect to such shares shall forthwith after the Redemption Date terminate, except only the right of the holders to receive the Senior Preferred Liquidation Amount or Junior Preferred Liquidation Amount, as the case may be, without interest upon surrender of their certificate or certificates therefor.

Prior to the distribution or redemption provided for in this Subsection 2.3.2(b), the Corporation shall not expend or dissipate the consideration received for such Deemed Liquidation Event, except to discharge expenses incurred in connection with such Deemed Liquidation Event or in the ordinary course of business.

2.3.3 Amount Deemed Paid or Distributed. The amount deemed paid or distributed to the holders of capital stock of the Corporation upon any such merger, consolidation, sale, transfer, exclusive license, other disposition or redemption shall be the cash or the value of the property, rights or securities paid or distributed to such holders by the Corporation or the acquiring person, firm or other entity. The value of such property, rights or securities shall be determined in good faith by the Board of Directors of the Corporation.

2.3.4 Allocation of Escrow. In the event of a Deemed Liquidation Event pursuant to Subsection 2.3.1(a)(i), if any portion of the consideration payable to the stockholders of the Corporation is placed into escrow and/or is payable to the stockholders of the Corporation subject to contingencies, the Merger Agreement shall provide that (a) the portion of such consideration that is not placed in escrow and not subject to any contingencies (the "**Initial Consideration**") shall be allocated among the holders of capital stock of the Corporation in accordance with Subsections 2.1 and 2.2 as if the Initial Consideration were the only consideration payable in connection with such Deemed Liquidation Event and (b) any additional consideration which becomes payable to the stockholders of the Corporation upon release from escrow or satisfaction of contingencies shall be allocated among the holders of capital stock of the Corporation in accordance with Sections 2.1 and 2.2 after taking into account the previous payment of the Initial Consideration as part of the same transaction.

3. Voting.

3.1 General. On any matter presented to the stockholders of the Corporation for their action or consideration at any meeting of stockholders of the Corporation (or by written consent of stockholders in lieu of meeting), each holder of outstanding shares of Preferred Stock shall be entitled to cast the number of votes equal to the number of whole shares of Common Stock into which the shares of Preferred Stock held by such holder are convertible as of the record date for determining stockholders entitled to vote on such matter. Except as provided by law or by the other provisions of the Certificate of Incorporation, holders of Preferred Stock shall vote together with the holders of Common Stock as a single class.

3.2 Election of Directors. The Board of Directors shall consist of seven (7) members.

3.2.1 The holders of record of shares of Series B Preferred Stock, voting exclusively and as a separate class, shall be entitled to elect two (2) directors of the Corporation (the "**Series B Directors**").

3.2.2 The holders of record of shares of Series C Preferred Stock, voting exclusively and as a separate class, shall be entitled to elect two (2) directors of the Corporation (the "**Series C Directors**", and together with the Series B Directors, the "**Preferred Directors**").

3.2.3 Together, the holders of Preferred Stock and Common Stock, voting as a single class on an as-converted basis, shall be entitled to elect three (3) directors of the Corporation.

3.2.4 Any director elected as provided in Subsections 3.2.1, 3.2.2 or 3.2.3 may be removed without cause by, and only by, the affirmative vote of the holders of the shares of the class or series of capital stock entitled to elect such director or directors, given either at a special meeting of such stockholders duly called for that purpose or pursuant to a written consent of stockholders. If the holders of shares of stock entitled to elect such director or directors pursuant to Subsections 3.2.1, 3.2.2 or 3.2.3 fail to elect a sufficient number of directors to fill all directorships for which they are entitled to elect directors, voting exclusively and pursuant to Subsections 3.2.1, 3.2.2 or 3.2.3, as the case may be, then any directorship not so filled shall remain vacant until such time as such holders elect a person to fill such directorship by vote or written consent in lieu of a meeting; and no such directorship may be filled by stockholders of the Corporation other than by the stockholders of the Corporation that are entitled to elect a person to fill such directorship pursuant to Subsections 3.2.1, 3.2.2 or 3.2.3, as the case may be, voting exclusively and as a separate class . At any meeting held for the purpose of electing a director, the presence in person or by proxy of the holders of a majority of the outstanding shares of the class or series entitled to elect such director shall constitute a quorum for the purpose of electing such director. Except as otherwise provided in this Subsection 3.2.4, a vacancy in any directorship filled by the holders of any class or series shall be filled only by vote or written consent in lieu of a meeting of the holders of such class or series or by any remaining director or directors elected by the holders of such class or series pursuant to this Subsection 3.2.4. The rights of the holders to elect directors pursuant to Subsection 3.2.1 shall terminate on the first date following the Series E Original Issue Date (as defined below) on which there are issued and outstanding less than 2,000,000 shares of Series B Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series B Preferred Stock), after which the directors otherwise to be elected pursuant to Subsection 3.2.1 shall be elected by the holders of record of the Preferred Stock and Common Stock, voting together as a single class on an as converted basis. The rights of the holders to elect directors pursuant to Subsection 3.2.2 shall terminate on the first date following the Series E Original Issue Date on which there are issued and outstanding less than 2,000,000 shares of Series C Preferred Stock (subject to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization with respect to the Series C Preferred Stock), after which the directors otherwise to be elected pursuant to Subsection 3.2.2 shall be elected by the holders of record of the Preferred Stock and Common Stock, voting together as a single class on an as-converted basis.

3.3 Series E Preferred Stock Protective Provisions. At any time when shares of Series E Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly, by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or the Certificate of Incorporation) the written consent or affirmative vote of holders of at least a majority of the then outstanding shares of Series E Preferred Stock, given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class:

3.3.1 amend, alter or change any of the rights, preferences, privileges or powers of, or the restrictions provided for the benefit of the holders of, the Series E Preferred Stock;

3.3.2 amend, alter or repeal any provision of the Certificate of Incorporation or Bylaws of the Corporation in a manner that adversely affects the rights, preferences, privileges or powers of the Series E Preferred Stock;

3.3.3 increase or decrease the authorized number shares of Series E Preferred Stock;

3.3.4 take any action that results in the redemption or repurchase of the Series E Preferred Stock; or

3.3.5 redeem, repurchase (or permit any subsidiary to redeem or repurchase) or make other acquisitions of the Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Junior Preferred or Common Stock (other than repurchases of Common Stock or options to purchase Common Stock from former employees or consultants pursuant to the provisions of existing plans or agreements).

3.4 Series D Preferred Stock Protective Provisions. At any time when shares of Series D Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly, by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or the Certificate of Incorporation) the written consent or affirmative vote of holders of at least a majority of the then outstanding shares of Series D Preferred Stock, given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class:

3.4.1 amend, alter or change any of the rights, preferences, privileges or powers of, or the restrictions provided for the benefit of the holders of, the Series D Preferred Stock;

3.4.2 amend, alter or repeal any provision of the Certificate of Incorporation or Bylaws of the Corporation in a manner that adversely affects the rights, preferences, privileges or powers of the Series D Preferred Stock;

3.4.3 increase or decrease the authorized number shares of Series D Preferred Stock;

3.4.4 take any action that results in the redemption or repurchase of the Series D Preferred Stock;

3.4.5 redeem, repurchase (or permit any subsidiary to redeem or repurchase) or make other acquisitions of the Series C Preferred Stock, Series B Preferred Stock, Junior Preferred or Common Stock (other than repurchases of Common Stock or options to purchase Common Stock from former employees or consultants pursuant to the provisions of existing plans or agreements); or

3.4.6 declare or pay any dividends or distributions on the Series C Preferred Stock, Series B Preferred Stock, Junior Preferred or Common Stock.

3.5 Series C Preferred Stock Protective Provisions. At any time when shares of Series C Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly, by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or the Certificate of Incorporation) the written consent or affirmative vote of holders of at least 60% of the then outstanding shares of Series C Preferred Stock, given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class:

3.5.1 liquidate, dissolve or wind-up the business and affairs of the Corporation, effect any Deemed Liquidation Event, or consent to any of the foregoing;

3.5.2 amend, alter or change any of the rights, preferences, privileges or powers of, or the restrictions provided for the benefit of the holders of, the Series C Preferred Stock;

3.5.3 amend, alter or repeal any provision of the Certificate of Incorporation or Bylaws of the Corporation in a manner that adversely affects the powers, preferences or rights of the Series C Preferred Stock;

3.5.4 create, or authorize the creation of, or issue or obligate itself to issue shares of, any additional class or series of capital stock unless the same ranks junior to the Series C Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption, or increase the authorized number of shares of Series C Preferred Stock or increase the authorized number of shares of any additional class or series of capital stock unless the same ranks junior to the Series C Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption;

3.5.5 materially change the business of the Corporation;

3.5.6 increase or decrease the authorized number of directors constituting the Board of Directors;

3.5.7 declare or pay any dividends or distributions on the Preferred Stock or Common Stock; or

3.5.8 redeem, repurchase (or permit any subsidiary to redeem or repurchase) or make other acquisitions of any securities of the Corporation (other than repurchases of Common Stock or options to purchase Common Stock from former employees or consultants pursuant to the provisions of existing plans or agreements).

3.6 Series B Preferred Stock Protective Provisions. At any time when shares of Series B Preferred Stock are outstanding, the Corporation shall not, either directly or indirectly by amendment, merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or the Certificate of Incorporation) the written consent or affirmative vote of the holders of a majority of the then outstanding shares of Series B Preferred Stock, given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class:

3.6.1 liquidate, dissolve or wind-up the business and affairs of the Corporation, effect any Deemed Liquidation Event, or consent to any of the foregoing;

3.6.2 amend, alter or change any of the rights, preferences, privileges or powers of, or the restrictions provided for the benefit of the holders of, the Series B Preferred Stock;

3.6.3 amend, alter or repeal any provision of the Certificate of Incorporation or Bylaws of the Corporation in a manner that adversely affects the powers, preferences or rights of the Series B Preferred Stock;

3.6.4 create, or authorize the creation of, or issue or obligate itself to issue shares of, any additional class or series of capital stock unless the same ranks junior to the Series B Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption, or increase the authorized number of shares of Series B Preferred Stock or increase the authorized number of shares of any additional class or series of capital stock unless the same ranks junior to the Series B Preferred Stock with respect to the distribution of assets on the liquidation, dissolution or winding up of the Corporation, the payment of dividends and rights of redemption;

3.6.5 materially change the business of the Corporation;

3.6.6 increase or decrease the authorized number of directors constituting the Board of Directors;

3.6.7 declare or pay any dividends or distributions on the Preferred Stock or Common Stock; or

3.6.8 redeem, repurchase (or permit any subsidiary to redeem or repurchase) or make other acquisitions of any securities of the Corporation (other than repurchases of Common Stock or options to purchase Common Stock from former employees or consultants pursuant to the provisions of existing plans or agreements).

3.7 Junior Preferred Protective Provisions. At any time when shares of Junior Preferred are outstanding, the Corporation shall not, either directly or indirectly by amendment,

merger, consolidation or otherwise, do any of the following without (in addition to any other vote required by law or the Certificate of Incorporation) the written consent or affirmative vote of the holders of a majority of the then outstanding shares of Series A-1 Preferred Stock or Series A Preferred Stock, as the case may be, given in writing or by vote at a meeting, consenting or voting (as the case may be) separately as a class:

3.7.1 amend, alter or change any of the rights, preferences, privileges or powers of, or the restrictions provided for the benefit of the holders of, the Series A-1 Preferred Stock or Series A Preferred Stock, as the case may be; or

3.7.2 increase the authorized number of shares of Series A-1 Preferred Stock or Series A Preferred Stock, as the case may be, or reissue shares of Series A-1 Preferred Stock or Series A Preferred Stock, as the case may be, that have been reacquired (including by way of purchase, redemption or conversion).

3.8 Special Vote. The approval of the holders of at least a majority of the Company's Senior Preferred, Junior Preferred and Common Stock voting together as a single class on an as-converted basis shall be required in order to purchase or redeem (or permit any subsidiary to purchase or redeem) any shares of capital stock of the Corporation other than (i) redemptions of the Preferred Stock as expressly authorized herein and (ii) repurchases of stock from former employees, officers, directors, consultants or other persons who performed services for the Corporation or any subsidiary in connection with the cessation of such employment or service pursuant to the agreements approved by the Board of Directors.

4. Optional Conversion.

The holders of the Preferred Stock shall have conversion rights as follows (the "**Conversion Rights**"):

4.1 Right to Convert.

4.1.1 Conversion Ratio. Each share of Preferred Stock shall be convertible, at the option of the holder thereof, at any time and from time to time, and without the payment of additional consideration by the holder thereof, into such number of fully paid and nonassessable shares of Common Stock as is determined by dividing the Series E Original Issue Price, Series D Original Issue Price, the Series C Original Issue Price, Series B Original Issue Price, Series A-1 Original Issue Price or Series A Original Issue Price, as the case may be, by the relevant Conversion Price (as defined below) in effect for such series at the time of conversion. The "**Series E Conversion Price**" shall initially be equal to $10.5886. The "**Series D Conversion Price**" shall initially be equal to $2.7029. The "**Series C Conversion Price**" shall initially be equal to $2.17. The "**Series B Conversion Price**" shall initially be equal to $1.1937322. The "**Series A-1 Conversion Price**" shall initially be equal to $1.36. The "**Series A Conversion Price**" shall initially be equal to $50.00. Such initial Series E Conversion Price Series, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price and Series A Conversion Price, and the rate at which shares of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock and Series A Preferred Stock, as the case may be, may be converted into shares of Common Stock, shall be subject to adjustment as provided below.

4.1.2 Termination of Conversion Rights. In the event of a liquidation, dissolution or winding up of the Corporation or a Deemed Liquidation Event, the Conversion Rights shall terminate at the close of business on the last full day preceding the date fixed for the payment of any such amounts distributable on such event to the holders of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock and Series A Preferred Stock, as the case may be.

4.2 Fractional Shares. No fractional shares of Common Stock shall be issued upon conversion of the Preferred Stock. In lieu of any fractional shares to which the holder would otherwise be entitled, the Corporation shall pay cash equal to such fraction multiplied by the fair market value of a share of Common Stock as determined in good faith by the Board of Directors of the Corporation. Whether or not fractional shares would be issuable upon such conversion shall be determined on the basis of the total number of shares of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock or Series A Preferred Stock, as the case may be, the holder is at the time converting into Common Stock and the aggregate number of shares of Common Stock issuable upon such conversion.

4.3 Mechanics of Conversion.

4.3.1 Notice of Conversion. In order for a holder of Preferred Stock to voluntarily convert shares of Preferred Stock into shares of Common Stock, such holder shall surrender the certificate or certificates for such shares of Preferred Stock (or, if such registered holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate), at the office of the transfer agent for the Preferred Stock (or at the principal office of the Corporation if the Corporation serves as its own transfer agent), together with written notice that such holder elects to convert all or any number of the shares of the Preferred Stock represented by such certificate or certificates and, if applicable, any event on which such conversion is contingent. Such notice shall state such holder's name or the names of the nominees in which such holder wishes the certificate or certificates for shares of Common Stock to be issued. If required by the Corporation, certificates surrendered for conversion shall be endorsed or accompanied by a written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or his, her or its attorney duly authorized in writing. The close of business on the date of receipt by the transfer agent (or by the Corporation if the Corporation serves as its own transfer agent) of such certificates (or lost certificate affidavit and agreement) and notice shall be the time of conversion (the "**Conversion Time**"), and the shares of Common Stock issuable upon conversion of the shares represented by such certificate shall be deemed to be outstanding of record as of such date. The Corporation shall, as soon as practicable after the Conversion Time, (i) issue and deliver to such holder of Preferred Stock, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable upon such conversion in accordance with the provisions hereof and a certificate for the number (if any) of the shares of Preferred Stock represented by

the surrendered certificate that were not converted into Common Stock, (ii) pay in cash such amount as provided in Section 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and (iii) pay all declared but unpaid dividends on the shares of Preferred Stock converted.

4.3.2 Reservation of Shares. The Corporation shall at all times when the Preferred Stock shall be outstanding, reserve and keep available out of its authorized but unissued capital stock, for the purpose of effecting the conversion of such Preferred Stock, such number of its duly authorized shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all Preferred Stock, the Corporation shall take such corporate action as may be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes, including, without limitation, engaging in best efforts to obtain the requisite stockholder approval of any necessary amendment to the Certificate of Incorporation. Before taking any action which would cause an adjustment reducing the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price, or Series A Conversion Price, as the case may be, below the then par value of the shares of Common Stock issuable upon conversion of the Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock or Series A Preferred Stock, as the case may be, the Corporation will take any corporate action which may, in the opinion of its counsel, be necessary in order that the Corporation may validly and legally issue fully paid and nonassessable shares of Common Stock at such adjusted Series E Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price, or Series A Conversion Price, as the case may be.

4.3.3 Effect of Conversion. All shares of Preferred Stock which shall have been surrendered for conversion as herein provided shall no longer be deemed to be outstanding and all rights with respect to such shares shall immediately cease and terminate at the Conversion Time, except only the right of the holders thereof to receive shares of Common Stock in exchange therefor, to receive payment in lieu of any fraction of a share otherwise issuable upon such conversion as provided in Section 4.2 and to receive payment of any dividends declared but unpaid thereon. Any shares of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock or Series A Preferred Stock, as the case may be, so converted shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock or Series A Preferred Stock, as the case may be, accordingly.

4.3.4 No Further Adjustment. Upon any such conversion, no adjustment to the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price, or Series A Conversion Price, as the case may be, shall be made for any declared but unpaid dividends on the Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock or Series A Preferred Stock, as the case may be, surrendered for conversion or on the Common Stock delivered upon conversion.

4.3.5 Taxes. The Corporation shall pay any and all issue and other similar taxes that may be payable in respect of any issuance or delivery of shares of Common Stock upon conversion of shares of Preferred Stock pursuant to this Section 4. The Corporation shall not, however, be required to pay any tax which may be payable in respect of any transfer involved in the issuance and delivery of shares of Common Stock in a name other than that in which the shares of Preferred Stock so converted were registered, and no such issuance or delivery shall be made unless and until the person or entity requesting such issuance has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid.

4.4 Adjustments to Series E Conversion Price, Series D Conversion Price, Series C Conversion Price and Series B Conversion Price for Diluting Issues.

4.4.1 Special Definitions. For purposes of this Article Fourth, the following definitions shall apply:

(a) "**Option**" shall mean rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock or Convertible Securities.

(b) "**Series E Original Issue Date**" shall mean the date on which the first share of Series E Preferred Stock was issued.

(c) "**Convertible Securities**" shall mean any evidences of indebtedness, shares or other securities directly or indirectly convertible into or exchangeable for Common Stock, but excluding Options.

(d) "**Additional Shares of Common Stock**" shall mean all shares of Common Stock issued (or, pursuant to Subsection 4.4.3 below, deemed to be issued) by the Corporation after the Series E Original Issue Date, other than (1) the following shares of Common Stock and (2) shares of Common Stock deemed issued pursuant to the following Options and Convertible Securities (clauses (1) and (2), collectively, "**Exempted Securities**"):

(i) Shares of Common Stock, Options or Convertible Securities issued by reason of a dividend, stock split, split-up or other distribution on shares of Common Stock that is covered by Sections 4.5, 4.6, 4.7 or 4.8;

(ii) Common Stock issued upon conversion of Preferred Stock;

(iii) 13,174,545 shares of Common Stock (or Options with respect thereto) (subject in either case to appropriate adjustment in the event of any stock dividend, stock split, combination or other similar

recapitalization with respect to such shares) issued or issuable to employees or directors of, or consultants to, the Corporation under the Corporation's 2009 Stock Incentive Plan (it being understood that that any shares of Common Stock (i) not issued pursuant to rights, agreements, option or warrants ("Unexercised Options") as a result of the termination of such Unexercised Options or (ii) reacquired by the Corporation from employees, directors or consultants at no more than cost pursuant to agreements that permit the Corporation to repurchase such shares upon termination of services to the Corporation shall not be counted toward such maximum number unless and until such shares are regranted as shares of Common Stock and/or options, warrants or other Common Stock purchase rights);

(iv) shares of Common Stock or Convertible Securities issued or issuable upon conversion or exchange of any Convertible Securities or exercise of any Options outstanding on the Series E Original Issue Date, in each case provided such issuance is pursuant to the terms of such Option or Convertible Security;

(v) shares of Common Stock, Options or Convertible Securities issued to banks, equipment lessors or other financial institutions, or to real property lessors, pursuant to a debt financing, equipment leasing or real property leasing transaction approved by the Board of Directors of the Corporation, that do not exceed an aggregate of 2% of the shares of Common Stock outstanding immediately prior to such issuance (treating for this purpose as outstanding all shares of Common Stock issuable upon exercise of Options outstanding immediately prior to such issue (whether or not vested) or upon conversion or exchange of Convertible Securities (including the Preferred Stock) outstanding (assuming exercise of any outstanding Options therefor) immediately prior to such issue); and

(vi) shares of Common Stock, Options or Convertible Securities issued in connection with sponsored research, collaboration, technology license, development, OEM, marketing or other similar

agreements or strategic partnerships, that are primarily of a non-equity financing nature, approved by the Board of Directors of the Corporation, that do not exceed an aggregate of 2% of the shares of Common Stock outstanding immediately prior to such issuance (treating for this purpose as outstanding all shares of Common Stock issuable upon exercise of Options outstanding immediately prior to such issue (whether or not vested) or upon conversion or exchange of Convertible Securities (including the Preferred Stock) outstanding (assuming exercise of any outstanding Options therefor) immediately prior to such issue).

4.4.2 No Adjustment of Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price. No adjustment of the Series E Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of at least a majority of the then outstanding shares of Series E Preferred Stock, agreeing that no such adjustment shall be made as a result of the issuance or deemed issuance of such Additional Shares of Common Stock. No adjustment of the Series D Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of at least 60% of the then outstanding shares of Series D Preferred Stock, agreeing that no such adjustment shall be made as a result of the issuance or deemed issuance of such Additional Shares of Common Stock. No adjustment to the Series C Conversion Price shall be made as the result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of at least 60% of the then outstanding shares of Series C Preferred Stock, agreeing that no such adjustment shall be made as the result of the issuance or deemed issuance of such Additional Shares of Common Stock. No adjustment to the Series B Conversion Price shall be made as a result of the issuance or deemed issuance of Additional Shares of Common Stock if the Corporation receives written notice from the holders of at least a majority of the then outstanding shares of Series B Preferred Stock agreeing that no such adjustment shall be made as a result of the issuance or deemed issuance of such Additional Shares of Common Stock.

4.4.3 Deemed Issue of Additional Shares of Common Stock.

(a) If the Corporation at any time or from time to time after the Series E Original Issue Date shall issue any Options or Convertible Securities (excluding Options or Convertible Securities which are themselves Exempted Securities) or shall fix a record date for the determination of holders of any class of securities entitled to receive any such Options or Convertible Securities, then the maximum number of shares of Common Stock (as set forth in the instrument relating thereto, assuming the satisfaction of any conditions to exercisability, convertibility or exchangeability but without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or, in the case of Convertible Securities and Options therefor, the conversion or exchange of such

Convertible Securities, shall be deemed to be Additional Shares of Common Stock issued as of the time of such issue or, in case such a record date shall have been fixed, as of the close of business on such record date.

(b) If the terms of any Option or Convertible Security, the issuance of which resulted in an adjustment to the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price, as the case may be, pursuant to the terms of Subsection 4.4.4 below, are revised as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase or decrease in the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any such Option or Convertible Security or (2) any increase or decrease in the consideration payable to the Corporation upon such exercise, conversion and/or exchange, then, effective upon such increase or decrease becoming effective, the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price, as the case may be, computed upon the original issue of such Option or Convertible Security (or upon the occurrence of a record date with respect thereto) shall be readjusted to such Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price, as the case may be, as would have been obtained had such revised terms been in effect upon the original date of issuance of such Option or Convertible Security. Notwithstanding the foregoing, (x) no readjustment pursuant to this clause (b) shall have the effect of increasing the Series E Conversion Price, Series D Conversion Price or Series C Conversion Price, as the case may be, to an amount which exceeds the lower of (i) the Series E Conversion Price, the Series D Conversion Price or Series C Conversion Price, as the case may be, in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (ii) the Series E Conversion Price, the Series D Conversion Price or Series C Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date and (y) no readjustment pursuant to this clause (b) shall have the effect of increasing the Series B Conversion Price to an amount which exceeds the lower of (i) the Series B Conversion Price in effect immediately prior to the original adjustment made as a result of the issuance of such Option or Convertible Security, or (ii) the Series B Conversion Price that would have resulted from any issuances of Additional Shares of Common Stock (other than deemed issuances of Additional Shares of Common Stock as a result of the issuance of such Option or Convertible Security) between the original adjustment date and such readjustment date.

(c) If the terms of any Option or Convertible Security (excluding Options or Convertible Securities which are themselves Exempted Securities), the issuance of which did not result in an adjustment to the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price pursuant to the terms of Subsection 4.4.4 (either because the consideration per share (determined pursuant to Subsection 4.4.5) of the Additional Shares of Common Stock subject thereto was equal to or greater than the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price, as the case may be, then in effect, or because such Option or Convertible Security was issued before the Series E Original Issue Date), are revised after the

Series E Original Issue Date as a result of an amendment to such terms or any other adjustment pursuant to the provisions of such Option or Convertible Security (but excluding automatic adjustments to such terms pursuant to anti-dilution or similar provisions of such Option or Convertible Security) to provide for either (1) any increase in the number of shares of Common Stock issuable upon the exercise, conversion or exchange of any such Option or Convertible Security or (2) any decrease in the consideration payable to the Corporation upon such exercise, conversion or exchange, then such Option or Convertible Security, as so amended or adjusted, and the Additional Shares of Common Stock subject thereto (determined in the manner provided in Subsection 4.4.3(a)) shall be deemed to have been issued effective upon such increase or decrease becoming effective.

(d) Upon the expiration or termination of any unexercised Option or unconverted or unexchanged Convertible Security (or portion thereof) which resulted (either upon its original issuance or upon a revision of its terms) in an adjustment to the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price pursuant to the terms of Subsection 4.4.4, the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price, as the case may be, shall be readjusted to such Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price, as the case may be, as would have obtained had such Option or Convertible Security (or portion thereof) never been issued.

(e) If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, is calculable at the time such Option or Convertible Security is issued or amended but is subject to adjustment based upon subsequent events, any adjustment to the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price provided for in this Subsection 4.4.3 shall be effected at the time of such issuance or amendment based on such number of shares or amount of consideration without regard to any provisions for subsequent adjustments (and any subsequent adjustments shall be treated as provided in clauses (b) and (c) of this Subsection 4.4.3). If the number of shares of Common Stock issuable upon the exercise, conversion and/or exchange of any Option or Convertible Security, or the consideration payable to the Corporation upon such exercise, conversion and/or exchange, cannot be calculated at all at the time such Option or Convertible Security is issued or amended, any adjustment to the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price that would result under the terms of this Subsection 4.4.3 at the time of such issuance or amendment shall instead be effected at the time such number of shares and/or amount of consideration is first calculable (even if subject to subsequent adjustments), assuming for purposes of calculating such adjustment to the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price that such issuance or amendment took place at the time such calculation can first be made.

4.4.4 Adjustment of Series E Conversion Price, Series D Conversion Price, Series C Conversion Price and Series B Conversion Price Upon Issuance of Additional Shares of Common Stock. In the event the Corporation shall at any time after the Series E Original Issue Date issue Additional Shares of Common Stock (including Additional Shares of Common Stock deemed to be issued pursuant to Subsection 4.4.3), without consideration or for a consideration

per share less than the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price, as the case may be, in effect immediately prior to such issue, then the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price and/or Series B Conversion Price, as the case may be, shall be reduced, concurrently with such issue, to a price (calculated to the nearest one-hundredth of a cent) determined in accordance with the following formula:

$$CP_2 = CP_1 * (A + B) \div (A + C).$$

For purposes of the foregoing formula, the following definitions shall apply:

(a) "CP_2" shall mean the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price, as the case may be, in effect immediately after such issue of Additional Shares of Common Stock

(b) "CP_1" shall mean the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price, as the case may be, in effect immediately prior to such issue of Additional Shares of Common Stock;

(c) "A" shall mean the number of shares of Common Stock outstanding immediately prior to such issue of Additional Shares of Common Stock (treating for this purpose as outstanding all shares of Common Stock issuable upon exercise of Options outstanding immediately prior to such issue (whether or not vested) or upon conversion or exchange of Convertible Securities (including the Preferred Stock) outstanding (assuming exercise of any outstanding Options therefor) immediately prior to such issue);

(d) "B" shall mean the number of shares of Common Stock that would have been issued if such Additional Shares of Common Stock had been issued at a price per share equal to CP1 (determined by dividing the aggregate consideration received by the Corporation in respect of such issue by CP1); and

(e) "C" shall mean the number of such Additional Shares of Common Stock issued in such transaction.

4.4.5 Determination of Consideration. For purposes of this Section 4.4, the consideration received by the Corporation for the issue of any Additional Shares of Common Stock shall be computed as follows:

(a) Cash and Property: Such consideration shall:

(i) insofar as it consists of cash, be computed at the aggregate amount of cash received by the Corporation, excluding amounts paid or payable for accrued interest;

(ii) insofar as it consists of property other than cash, be computed at the fair market value thereof at the time of such issue, as determined in good faith by the Board of Directors of the Corporation; and

(iii) in the event Additional Shares of Common Stock are issued together with other shares or securities or other assets of the Corporation for consideration which covers both, be the proportion of such consideration so received, computed as provided in clauses (i) and (ii) above, as determined in good faith by the Board of Directors of the Corporation.

(b) Options and Convertible Securities. The consideration per share received by the Corporation for Additional Shares of Common Stock deemed to have been issued pursuant to Subsection 4.4.3, relating to Options and Convertible Securities, shall be determined by dividing:

(i) the total amount, if any, received or receivable by the Corporation as consideration for the issue of such Options or Convertible Securities, plus the minimum aggregate amount of additional consideration (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such consideration) payable to the Corporation upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities, by

(ii) the maximum number of shares of Common Stock (as set forth in the instruments relating thereto, without regard to any provision contained therein for a subsequent adjustment of such number) issuable upon the exercise of such Options or the conversion or exchange of such Convertible Securities, or in the case of Options for Convertible Securities, the exercise of such Options for Convertible Securities and the conversion or exchange of such Convertible Securities.

4.4.6 Multiple Closing Dates. In the event the Corporation shall issue on more than one date Additional Shares of Common Stock that are a part of one transaction or a series of related transactions and that would result in an adjustment to the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price pursuant to the terms of Subsection 4.4.4 then, upon the final such issuance, the Series E

Conversion Price, Series D Conversion Price, Series C Conversion Price or Series B Conversion Price, as the case may be, shall be readjusted to give effect to all such issuances as if they occurred on the date of the first such issuance (and without giving effect to any additional adjustments as a result of any such subsequent issuances within such period).

4.5 Adjustment for Stock Splits and Combinations. If the Corporation shall at any time or from time to time after the Series E Original Issue Date effect a subdivision of the outstanding Common Stock, the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price and Series A Conversion Price, as the case may be, in effect immediately before that subdivision shall be proportionately decreased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be increased in proportion to such increase in the aggregate number of shares of Common Stock outstanding. If the Corporation shall at any time or from time to time after the Series E Original Issue Date combine the outstanding shares of Common Stock, the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price and Series A Conversion Price, as the case may be, in effect immediately before the combination shall be proportionately increased so that the number of shares of Common Stock issuable on conversion of each share of such series shall be decreased in proportion to such decrease in the aggregate number of shares of Common Stock outstanding. Any adjustment under this Section 4.5 shall become effective at the close of business on the date the subdivision or combination becomes effective.

4.6 Adjustment for Certain Dividends and Distributions. In the event the Corporation at any time or from time to time after the Series E Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable on the Common Stock in additional shares of Common Stock, then and in each such event the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price and Series A Conversion Price, as the case may be, in effect immediately before such event shall be decreased as of the time of such issuance or, in the event such a record date shall have been fixed, as of the close of business on such record date, by multiplying the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price and Series A Conversion Price, as the case may be, then in effect by a fraction:

(1) the numerator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date, and

(2) the denominator of which shall be the total number of shares of Common Stock issued and outstanding immediately prior to the time of such issuance or the close of business on such record date plus the number of shares of Common Stock issuable in payment of such dividend or distribution.

Notwithstanding the foregoing, (a) if such record date shall have been fixed and such dividend is not fully paid or if such distribution is not fully made on the date fixed therefor, the Series E

Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price and Series A Conversion Price, as the case may be, shall be recomputed accordingly as of the close of business on such record date and thereafter the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price and Series A Conversion Price, as the case may be, shall be adjusted pursuant to this Section 4.6 as of the time of actual payment of such dividends or distributions; and (b) no such adjustment shall be made if the holders of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be, simultaneously receive a dividend or other distribution of shares of Common Stock in a number equal to the number of shares of Common Stock as they would have received if all outstanding shares of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be, had been converted into Common Stock on the date of such event.

4.7 Adjustments for Other Dividends and Distributions. In the event the Corporation at any time or from time to time after the Series E Original Issue Date shall make or issue, or fix a record date for the determination of holders of Common Stock entitled to receive, a dividend or other distribution payable in securities of the Corporation (other than a distribution of shares of Common Stock in respect of outstanding shares of Common Stock) or in other property and the provisions of Section 1 do not apply to such dividend or distribution, then and in each such event the holders of Preferred Stock shall receive, simultaneously with the distribution to the holders of Common Stock, a dividend or other distribution of such securities or other property in an amount equal to the amount of such securities or other property as they would have received if all outstanding shares of Preferred Stock had been converted into Common Stock on the date of such event.

4.8 Adjustment for Merger or Reorganization, etc. Subject to the provisions of Section 2.3, if there shall occur any reorganization, recapitalization, reclassification, consolidation or merger involving the Corporation in which the Common Stock (but not the Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be) is converted into or exchanged for securities, cash or other property (other than a transaction covered by Sections 4.4, 4.6 or 4.7), then, following any such reorganization, recapitalization, reclassification, consolidation or merger, each share of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be, shall thereafter be convertible in lieu of the Common Stock into which it was convertible prior to such event into the kind and amount of securities, cash or other property which a holder of the number of shares of Common Stock of the Corporation issuable upon conversion of one share of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be, immediately prior to such reorganization, recapitalization, reclassification, consolidation or merger would have been entitled to receive pursuant to such transaction; and, in such case, appropriate adjustment (as determined in good faith by the Board of Directors of the Corporation) shall be made in the application of the provisions in this Section 4 with respect to the rights and interests thereafter of the holders of the Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred

Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be, to the end that the provisions set forth in this Section 4 (including provisions with respect to changes in and other adjustments of the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price or Series A Conversion Price, as the case may be) shall thereafter be applicable, as nearly as reasonably may be, in relation to any securities or other property thereafter deliverable upon the conversion of the Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be.

4.9 Certificate as to Adjustments. Upon the occurrence of each adjustment or readjustment of the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price or Series A Conversion Price, as the case may be, pursuant to this Section 4, the Corporation at its expense shall, as promptly as reasonably practicable but in any event not later than 10 days thereafter, compute such adjustment or readjustment in accordance with the terms hereof and furnish to each holder of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be, a certificate setting forth such adjustment or readjustment (including the kind and amount of securities, cash or other property into which the Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be, is convertible) and showing in detail the facts upon which such adjustment or readjustment is based. The Corporation shall, as promptly as reasonably practicable after the written request at any time of any holder of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be (but in any event not later than 10 days thereafter), furnish or cause to be furnished to such holder a certificate setting forth (i) the Series E Conversion Price, Series D Conversion Price, Series C Conversion Price, Series B Conversion Price, Series A-1 Conversion Price or Series A Conversion Price, as the case may be, then in effect, and (ii) the number of shares of Common Stock and the amount, if any, of other securities, cash or property which then would be received upon the conversion of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be.

4.10 Notice of Record Date. In the event:

(a) the Corporation shall take a record of the holders of its Common Stock (or other capital stock or securities at the time issuable upon conversion of the Preferred Stock) for the purpose of entitling or enabling them to receive any dividend or other distribution, or to receive any right to subscribe for or purchase any shares of capital stock of any class or any other securities, or to receive any other security; or

(b) of any capital reorganization of the Corporation, any reclassification of the Common Stock of the Corporation, or any Deemed Liquidation Event; or

(c) of the voluntary or involuntary dissolution, liquidation or winding-up of the Corporation,

then, and in each such case, the Corporation will send or cause to be sent to the holders of the Preferred Stock a notice specifying, as the case may be, (i) the record date for such dividend, distribution or right, and the amount and character of such dividend, distribution or right, or (ii) the effective date on which such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up is proposed to take place, and the time, if any is to be fixed, as of which the holders of record of Common Stock (or such other capital stock or securities at the time issuable upon the conversion of the Preferred Stock) shall be entitled to exchange their shares of Common Stock (or such other capital stock or securities) for securities or other property deliverable upon such reorganization, reclassification, consolidation, merger, transfer, dissolution, liquidation or winding-up, and the amount per share and character of such exchange applicable to the Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, Series A Preferred Stock and the Common Stock. Such notice shall be sent at least 20 days prior to the record date or effective date for the event specified in such notice.

5. Mandatory Conversion.

5.1 Trigger Events. Upon either (a) the closing of the sale of shares of Common Stock to the public in a firm-commitment underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended (or in a jurisdiction and on a recognized securities exchange outside of the United States provided that such public offering in terms of price, offering proceeds and regulatory approval is reasonably equivalent to a United States public offering), resulting in at least $45,000,000 of gross proceeds, net of the underwriting discount and commissions, to the Corporation; provided, that the Common Stock been listed for trading on a "national securities exchange" registered with the U.S. Securities and Exchange Commission under Section 6 of the Securities Exchange Act of 1934, as amended, or (b) the date and time, or the occurrence of an event, specified by vote or written consent of the holders of (1) a majority of the then outstanding shares of Series B Preferred Stock, (2) a majority of the then outstanding shares of Series C Preferred Stock, and (3) at least 60% of the then outstanding shares of Series D Preferred Stock (the time of such closing or the date and time specified or the time of the event specified in such vote or written consent is referred to herein as the "**Mandatory Conversion Time**"), (i) all outstanding shares of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock and Series A Preferred Stock shall automatically be converted into shares of Common Stock, at the then effective conversion rate and (ii) such shares may not be reissued by the Corporation.

5.2 Procedural Requirements. All holders of record of shares of Preferred Stock shall be sent written notice of the Mandatory Conversion Time and the place designated for mandatory conversion of all such shares of Preferred Stock pursuant to this Section 5. Such notice need not be sent in advance of the occurrence of the Mandatory Conversion Time. Upon receipt of such notice, each holder of shares of Preferred Stock shall surrender his, her or its certificate or certificates for all such shares (or, if such holder alleges that such certificate has been lost, stolen or destroyed, a lost certificate affidavit and agreement reasonably acceptable to the Corporation to indemnify the Corporation against any claim that may be made against the Corporation on account of the alleged loss, theft or destruction of such certificate) to the Corporation at the place designated in such notice. If so required by the Corporation, certificates

surrendered for conversion shall be endorsed or accompanied by written instrument or instruments of transfer, in form satisfactory to the Corporation, duly executed by the registered holder or by his, her or its attorney duly authorized in writing. All rights with respect to the Preferred Stock converted pursuant to Section 5.1, including the rights, if any, to receive notices and vote (other than as a holder of Common Stock), will terminate at the Mandatory Conversion Time (notwithstanding the failure of the holder or holders thereof to surrender the certificates at or prior to such time), except only the rights of the holders thereof, upon surrender of their certificate or certificates (or lost certificate affidavit and agreement) therefor, to receive the items provided for in the next sentence of this Section 5.2. As soon as practicable after the Mandatory Conversion Time and the surrender of the certificate or certificates (or lost certificate affidavit and agreement) for Preferred Stock, the Corporation shall issue and deliver to such holder, or to his, her or its nominees, a certificate or certificates for the number of full shares of Common Stock issuable on such conversion in accordance with the provisions hereof, together with cash as provided in Section 4.2 in lieu of any fraction of a share of Common Stock otherwise issuable upon such conversion and the payment of any declared but unpaid dividends on the shares of Preferred Stock converted. Such converted Preferred Stock shall be retired and cancelled and may not be reissued as shares of such series, and the Corporation may thereafter take such appropriate action (without the need for stockholder action) as may be necessary to reduce the authorized number of shares of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be, accordingly.

6. Redemption. The Preferred Stock is not redeemable except in accordance with the Deemed Liquidation provisions in Subsection 2.3.2(b).

7. Redeemed or Otherwise Acquired Shares. Any shares of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be, that are redeemed or otherwise acquired by the Corporation or any of its subsidiaries shall be automatically and immediately cancelled and retired and shall not be reissued, sold or transferred. Neither the Corporation nor any of its subsidiaries may exercise any voting or other rights granted to the holders of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be, following redemption.

8. Waiver. Any of the rights, powers, preferences and other terms of the Series E Preferred Stock set forth herein may be waived on behalf of all holders of Series E Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series E Preferred Stock then outstanding. Except for matters set forth herein requiring the vote or consent of the holders of a majority of the Series D Preferred Stock and Series C Preferred Stock, voting together as a single class on an as-converted to Common Stock basis, or the holders of at least 60% of the then outstanding shares of Series D Preferred Stock, any of the rights, powers, preferences and other terms of the Series D Preferred Stock set forth herein may be waived on behalf of all holders of Series D Preferred Stock by the affirmative, written consent or vote of the holders of at least a majority of Series D Preferred Stock then outstanding. Except for matters set forth herein requiring the vote or consent of the holders of a majority of the Series D Preferred Stock and Series C Preferred Stock, voting together as a single class on an

as-converted to Common Stock basis, any of the rights, powers, preferences and other terms of the Series C Preferred Stock set forth herein may be waived on behalf of all holders of Series C Preferred Stock by the affirmative written consent or vote of the holders of at least 60% of the shares of Series C Preferred Stock then outstanding. Any of the rights, powers, preferences and other terms of the Series B Preferred Stock set forth herein may be waived on behalf of all holders of Series B Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series B Preferred Stock then outstanding. Any of the rights, powers, preferences and other terms of the Series A-1 Preferred Stock set forth herein may be waived on behalf of all holders of Series A-1 Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series A-1 Preferred Stock then outstanding. Any of the rights, powers, preferences and other terms of the Series A Preferred Stock set forth herein may be waived on behalf of all holders of Series A Preferred Stock by the affirmative written consent or vote of the holders of a majority of the shares of Series A Preferred Stock then outstanding.

9. Notices. Any notice required or permitted by the provisions of this Article Fourth to be given to a holder of shares of Series E Preferred Stock, Series D Preferred Stock, Series C Preferred Stock, Series B Preferred Stock, Series A-1 Preferred Stock, or Series A Preferred Stock, as the case may be, shall be deemed given (A) if in the United States, via United States mail, postage prepaid and addressed to each holder of record at his address appearing on the books of this corporation when received, (B) if outside the United States, via United States mail, postage prepaid and addressed to each holder of record at his address appearing on the books of this corporation when received or (C) by electronic communication in compliance with the provisions of the General Corporation Law, upon such mailing or electronic transmission.

FIFTH: Subject to any additional vote required by the Certificate of Incorporation or Bylaws, in furtherance and not in limitation of the powers conferred by statute, the Board of Directors is expressly authorized to make, repeal, alter, amend and rescind any or all of the Bylaws of the Corporation.

SIXTH: Subject to any additional vote required by the Certificate of Incorporation, the number of directors of the Corporation shall be determined in the manner set forth in the Bylaws of the Corporation.

SEVENTH: Elections of directors need not be by written ballot unless the Bylaws of the Corporation shall so provide.

EIGHTH: Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws of the Corporation may provide. The books of the Corporation may be kept outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

NINTH: To the fullest extent permitted by law, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the General Corporation Law or any other law of the State of Delaware is amended after approval by the stockholders of this Article Ninth to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law as so amended.

Any repeal or modification of the foregoing provisions of this Article Ninth by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of, or increase the liability of any director of the Corporation with respect to any acts or omissions of such director occurring prior to, such repeal or modification.

TENTH: To the fullest extent permitted by applicable law, the Corporation is authorized to provide indemnification of (and advancement of expenses to) directors, officers and agents of the Corporation (and any other persons to which General Corporation Law permits the Corporation to provide indemnification) through Bylaw provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise, in excess of the indemnification and advancement otherwise permitted by Section 145 of the General Corporation Law.

Any amendment, repeal or modification of the foregoing provisions of this Article Tenth shall not adversely affect any right or protection of any director, officer or other agent of the Corporation existing at the time of such amendment, repeal or modification.

ELEVENTH: To the maximum extent permitted from time to time under the law of the State of Delaware, the Corporation renounces any interest or expectancy of the Corporation in, or being offered an opportunity to participate in, business opportunities that are from time to time being presented to its officers, directors or stockholders, other than (i) those officers, directors or stockholders who are employees of the Corporation and (ii) those opportunities demonstrated by the Corporation to have been presented to such officers, directors or stockholders expressly as a result of their activities as a director, officer or stockholder of the Corporation. No amendment or repeal of this provision shall apply to or have any effect on the liability or alleged liability of any officer, director or stockholder of the Corporation for or with respect to any opportunities to which such officer, director or stockholder becomes aware prior to such amendment or repeal.

TWELTH: In connection with repurchases by the Corporation of its Common Stock from employees, officers, directors, advisors, consultants or other persons performing services for the Corporation or any subsidiary pursuant to agreements under which the Corporation has the option to repurchase such shares at cost upon the occurrence of certain events, such as the termination of employment, Sections 502 and 503 of the California Corporations Code shall not apply in all or in part with respect to such repurchases.

IN WITNESS WHEREOF, this Amended and Restated Certificate of Incorporation has been executed by a duly authorized officer of the Corporation on this day of , 2015.

Stephen T. Isaacs, President

EXHIBIT B

Confidential Information and Inventions Assignment and Non-Solicitation Agreement

Aduro BioTech, Inc.

Proprietary Information And Inventions Agreement

In consideration of my employment or continued employment by Aduro BioTech, Inc. (the "Company"), and the compensation now and hereafter paid to me, I hereby agree as follows:

1. Recognition of Company's Rights; Nondisclosure. At all times during the term of my employment and thereafter, I will hold in strictest confidence and will not disclose, use, lecture upon or publish any of the Company's Proprietary Information (defined below), except as such disclosure, use or publication may be required in connection with my work for the Company, or unless the Board of Directors of the Company expressly authorizes such in writing. I hereby assign to the Company any rights I may have or acquire in such Proprietary Information and recognize that all Proprietary Information shall be the sole property of the Company and its assigns and that the Company and its assigns shall be the sole owner of all patent rights, copyrights, mask work rights, trade secret rights and all other rights throughout the world (collectively, "Proprietary Rights") in connection therewith.

The term "Proprietary Information" shall mean trade secrets, confidential knowledge, data or any other proprietary information of the Company. By way of illustration but not limitation, "Proprietary Information" includes (a) inventions, mask works, trade secrets, ideas, processes, formulas, source and object codes, data, programs, other works of authorship, cell lines, know-how, improvements, discoveries, developments, designs and techniques (hereinafter collectively referred to as "Inventions"); and (b) information regarding plans for research, development, new products, marketing and selling, business plans, budgets and unpublished financial statements, licenses, prices and costs, suppliers and customers; and information regarding the skills and compensation of other employees of the Company.

2. Third Party Information. I understand, in addition, that the Company has received and in the future will receive from third parties confidential or proprietary information ("Third Party Information") subject to a duty on the Company's part to maintain the confidentiality of such information and to use it only for certain limited purposes. During the term of my employment and thereafter, I will hold Third Party Information in the strictest confidence and will not disclose (to anyone other than Company personnel who need to know such information in connection with their work for the Company) or use, except in connection with my work for the Company, Third Party Information unless expressly authorized by an officer of the Company in writing.

3. Assignment of Inventions.

(a) I hereby assign to the Company all my right, title and interest in and to any and all Inventions (and all Proprietary Rights with respect thereto) whether or not patentable or registrable under copyright or similar statutes, made or conceived or reduced to practice or learned by me, either alone or jointly with others, during the period of my employment with the Company.

(b) I acknowledge that all original works of authorship which are made by me (solely or jointly with others) within the scope of my employment and which are protectable by

copyright are “works made for hire,” as that term is defined in the United States Copyright Act (17 U.S.C., Section 101). Inventions assigned to or as directed by the Company by this paragraph 3 are hereinafter referred to as “Company Inventions.”

4. Enforcement of Proprietary Rights. I will assist the Company in every proper way to obtain and from time to time enforce United States and foreign Proprietary Rights relating to Company Inventions in any and all countries. To that end I will execute, verify and deliver such documents and perform such other acts (including appearances as a witness) as the Company may reasonably request for use in applying for, obtaining, perfecting, evidencing, sustaining and enforcing such Proprietary Rights and the assignment thereof In addition, I will execute, verify and deliver assignments of such Proprietary Rights to the Company or its designee. My obligation to assist the Company with respect to Proprietary Rights relating to such Company Inventions in any and all countries shall continue beyond the termination of my employment, but the Company shall compensate me at a reasonable rate after my termination for the time actually spent by me at the Company’s request on such assistance.

In the event the Company is unable for any reason, after reasonable effort, to secure my signature on any document needed in connection with the actions specified in the preceding paragraph, I hereby irrevocably designate and appoint the Company and its duly authorized officers and agents as my agent and attorney in fact, to act for and in my behalf to execute, verify and file any such documents and to do all other lawfully permitted acts to further the purposes of the preceding paragraph thereon with the same legal force and effect as if executed by me. I hereby waive and quitclaim to the Company any and all claims, of any nature whatsoever, which I now or may hereafter have for infringement of any Proprietary Rights assigned hereunder to the Company.

5. Obligation to Keep Company Informed. During the period of my employment, I will promptly disclose to the Company fully and in writing and will hold in trust for the sole right and benefit of the Company any and all Inventions. In addition, after termination of my employment, I will disclose all patent applications filed by me within a year after termination of employment.

6. Prior Inventions. Inventions, if any, patented or unpatented, which I made prior to the commencement of my employment with the Company are excluded from the scope of this Agreement. To preclude any possible uncertainty, I have set forth on Exhibit A attached hereto a complete list of all Inventions that I have, alone or jointly with others, conceived, developed or reduced to practice or caused to be conceived, developed or reduced to practice prior to commencement of my employment with the Company, that I consider to be my property or the property of third parties and that I wish to have excluded from the scope of this Agreement. If disclosure of any such Invention on Exhibit A would cause me to violate any prior confidentiality agreement, I understand that I am not to list such Inventions in Exhibit A but am to inform the Company that all Inventions have been listed for that reason.

7. Additional Activities. I agree that during the period of my employment by the Company I will not, without the Company’s express written consent, engage in any employment or business activity other than for the Company except as noted on my Employment Agreement, and for the period of my employment by the Company and for two (2) years after the date of termination of my employment by the Company I will not induce any employee of the Company to leave the employ of the Company per the terms of my Employment Agreement.

8. No Improper Use of Materials. During my employment by the Company I will not improperly use or disclose any confidential information or trade secrets, if any, of any former employer or any other person to whom I have an obligation of confidentiality, and I will not bring onto the premises of the Company any unpublished documents or any property belonging to any former employer or any other person to whom I have an obligation of confidentiality unless consented to in writing by that former employer or person.

9. No Conflicting Obligation. I represent that my performance of all the terms of this Agreement and as an employee of the Company does not and will not breach any agreement to keep in confidence information acquired by me in confidence or in trust prior to my employment by the Company. I have not entered into, and I agree I will not enter into, any agreement either written or oral in conflict herewith.

10. Return of Company Documents. When I leave the employ of the Company, I will deliver to the Company all drawings, notes, memoranda, specifications, devices, formulas, molecules, cells and documents, together with all copies thereof, and any other material containing or disclosing any Company Inventions, Third Party Information or Proprietary Information of the Company. I further agree that any property situated on the Company's premises and owned by the Company, including disks and other storage media, filing cabinets or other work areas, is subject to inspection by Company personnel at any time with or without notice. Prior to leaving, I will cooperate with the Company in completing and signing the Company's termination statement for technical and management personnel.

11. Equal and Equitable Remedies. Because my services are personal and unique and because I may have access to and become acquainted with the Proprietary Information of the Company, the Company shall have the right to enforce this Agreement and any of its provisions by injunction, specific performance or other equitable relief, without bond, without prejudice to any other rights and remedies that the Company may have for a breach of this Agreement.

12. Notices. Any notices required or permitted hereunder shall be given to the appropriate party at the address specified below or at such other address as the party shall specify in writing. Such notice shall be deemed given upon personal delivery to the appropriate address or if sent by certified or registered mail, three days after the date of mailing.

13. General Provisions.

(a) Governing Law. This Agreement will be governed by and construed according to the laws of the State of California.

(b) Entire Agreement. This Agreement sets forth the entire agreement and understanding between the Company and me relating to the subject matter hereof and supersedes and merges all prior discussions between us. No modification of or amendment to this Agreement, nor any waiver of any rights under this Agreement, will be effective unless in writing signed by the party to be charged. Any subsequent change or changes in my duties, salary or compensation will not affect the validity or scope of this Agreement. As used in this Agreement, the period of my employment includes any time during which I may be retained by the Company as a consultant.

(c) Severability. If one or more of the provisions in this Agreement are deemed unenforceable by law, then the remaining provisions will continue in full force and effect.

(d) Successors and Assigns. This Agreement will be binding upon my heirs, executors, administrators and other legal representatives and will be for the benefit of the Company, its successors and its assigns.

(e) Survival. The provisions of this Agreement shall survive the termination of my employment and the assignment of this Agreement by the Company to any successor in interest or other assignee.

(f) Employment. I agree and understand that nothing in this Agreement shall confer any right with respect to continuation of employment by the Company, nor shall it interfere in any way with my right or the Company's right to terminate my employment at any time, with or without cause.

(g) Waiver. No waiver by the Company of any breach of this Agreement shall be a waiver of any preceding or succeeding breach. No waiver by the Company of any right under this Agreement shall be construed as a waiver of any other right. The Company shall not be required to give notice to enforce strict adherence to all terms of this Agreement.

(h) Effectiveness. This Agreement shall be effective as of the first day of my employment with the Company.

I UNDERSTAND THAT THIS AGREEMENT AFFECTS MY RIGHTS TO INVENTIONS I MAKE DURING MY EMPLOYMENT, AND RESTRICTS MY RIGHT TO DISCLOSE OR USE THE COMPANY'S PROPRIETARY INFORMATION DURING OR SUBSEQUENT TO MY EMPLOYMENT.

[Continued on next page]

I HAVE READ THIS AGREEMENT CAREFULLY AND UNDERSTAND ITS TERMS. I HAVE COMPLETELY FILLED OUT EXHIBIT A TO THIS AGREEMENT.

Dated as of , 2012
(Date of First Employment)

Signature of Employee

Printed Name of Employee

Address of Employee

ACCEPTED AND AGREED TO:

Aduro BioTech, Inc.

By:
Stephen Isaacs, Chairman & CEO

Exhibit 10.36

ADURO BIOTECH, INC.

COMMON STOCK PURCHASE AGREEMENT

THIS COMMON STOCK PURCHASE AGREEMENT (the "***Agreement***") is made as of March 12, 2015 (the "***Execution Date***") by and between Aduro Biotech, Inc., a Delaware corporation (the "***Company***"), and Novartis Institutes for BioMedical Research, Inc., a Delaware corporation (the "***Investor***").

RECITALS

WHEREAS, pursuant to terms set forth in this Agreement the Company desires to sell to the Investor, and the Investor desires to purchase from the Company, shares of the Company's common stock, par value $0.0001 per share (the "***Common Stock***");

NOW, THEREFORE, in consideration of the premises and mutual covenants herein contained, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

SECTION 1

Purchase and Sale of Shares

1.1 ***Sale of Shares***. Subject to the terms and conditions hereof, the Company will issue and sell to the Investor, and the Investor will purchase from the Company, at the Closing, $25,000,000 (the "***Aggregate Purchase Price***") worth of Common Stock (the "***Shares***") at a price per share equal to the price per share to the public in an underwritten initial public offering of the Common Stock (an "***IPO***") pursuant to a Registration Statement under the Securities Act of 1933, as amended.

1.2 ***Closing***. The purchase and sale of the Shares shall take place at a closing (the "***Closing***") to be held at the offices of Cooley LLP, 3175 Hanover Street, Palo Alto, California 94304-1130, immediately following the satisfaction or waiver of each of the conditions set forth in Sections 4 and 5 hereof (other than those conditions that are to be satisfied at the Closing, but subject to satisfaction or waiver of such conditions). At the Closing, the Company will deliver or cause to be delivered to the Investor a certificate or certificates representing the Shares that the Investor is purchasing and, concurrently, the Investor shall pay the Aggregate Purchase Price by wire transfer in accordance with the Company's instructions, which shall be provided in writing no later than two business days prior to the Closing Date.

SECTION 2

Representations and Warranties of the Company

Except as set forth on the Schedule of Exceptions delivered by the Company to the Investor on the date hereof, the Company hereby represents and warrants the following as of the date hereof and as of the Closing Date (except for the representations and warranties that speak as of a specific date, which shall be made as of such date). For purposes of these representations and warranties (other than those set forth in Sections 2.2, 2.4 and 2.6) the term "Company" includes any subsidiaries of the Company.

2.1 ***Organization and Good Standing and Qualifications***. The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and has full corporate power and authority to conduct its business as presently conducted and as proposed to be conducted by it. The Company is duly qualified to do business as a foreign corporation in California and is in good standing under the laws of such State. The Company is not required to be qualified to do business as a foreign corporation in any other jurisdiction in which the failure so to qualify would have a material adverse effect on the business, prospects, assets or condition (financial or otherwise) of the Company (a "***Company Material Adverse Effect***"). The Company has furnished to the Investor complete and accurate copies of its Certificate of Incorporation and By-laws, each as amended to date and presently in effect. The Company has at all times complied with all provisions of its Certificate of Incorporation and By-laws and is not in default under, or in violation of, any such provision. The Company is not, and has never been, a "shell company," as described in paragraphs (i)(1)(i) and (ii) of Rule 144 promulgated under the Securities Act of 1933, as amended (the "***Securities Act***").

2.2 ***Subsidiaries, Etc***. Except as set forth in Section 2.2 of the Schedule of Exceptions, the Company has no subsidiaries and does not own or control, directly or indirectly, any shares of capital stock of any other corporation or any interest in any partnership, limited liability company, joint venture or other non-corporate business enterprise.

2.3 ***Authorization***. The execution, delivery and performance by the Company of this Agreement, and the consummation by the Company of the transactions contemplated hereby, have been duly authorized by all necessary corporate action. This Agreement has been duly executed and delivered by the Company and constitutes a valid and binding obligation of the Company enforceable against the Company in accordance with its respective terms. The execution and delivery of this Agreement, the consummation of the transactions contemplated hereby and the compliance with the provisions of this Agreement by the Company will not (a) conflict with or violate any provision of the Certificate of Incorporation or By-laws of the Company, (b) conflict with, result in a breach of, constitute (with or without due notice or lapse of time or both) a default under, result in the acceleration of obligations under, create in any party the right to accelerate, terminate, modify or cancel, or require any notice, consent or waiver under, any contract, lease, sublease, license, sublicense, franchise, permit, indenture, agreement or mortgage for borrowed money, instrument of indebtedness, Security Interest (as defined below) or other arrangement to which the Company is a party or by which the Company is bound or to which its assets are subject, (c) result in the imposition of any Security Interest upon any assets of the Company or (d) violate any order, writ, injunction, decree, statute, rule or regulation applicable to the Company or any of its

properties or assets. For purposes of this Agreement, "***Security Interest***" means any mortgage, pledge, security interest, encumbrance, charge or other lien (whether arising by contract or by operation of law).

2.4 ***Valid Issuance of Shares***. The issuance, sale and delivery of the Shares in accordance with this Agreement, has been, or will be on or prior to the Closing, duly authorized by all necessary corporate action on the part of the Company, and all such shares have been duly reserved for issuance. The Shares when so issued, sold and delivered against payment therefor in accordance with the provisions of this Agreement, will be duly and validly issued, fully paid and nonassessable, and free of restrictions on transfer other than restrictions imposed or created under this Agreement, by applicable law, or by the Investor.

2.5 [Intentionally omitted.]

2.6 ***Capitalization***.

(a) The authorized capital stock of the Company as of the date of this Agreement consists of (i) 85,000,000 shares of Common Stock, $0.0001 par value per share, of which 589,214 shares are issued and outstanding and none are held in the treasury of the Company, and (ii) 69,716,345 shares of Preferred Stock, $0.0001 par value per share, of which (A) 161,843 shares have been designated as Series A Preferred, all of which are issued and outstanding, (B) 3,393,666 shares have been designated as Series A-1 Preferred, 3,369,431 of which are issued and outstanding, (C) 21,525,480 shares have been designated as Series B Preferred, 21,441,709 of which are issued and outstanding, (D) 25,623,183 shares have been designated as Series C Preferred, all of which are issued and outstanding and (E) 19,012,173 shares have been designated as Series D Preferred, all of which are issued and outstanding.

(b) Section 2.6(b) of the Schedule of Exceptions includes a complete and accurate list, as of the date of this Agreement, of the holders of capital stock of the Company, showing the number of shares of capital stock, and the class or series of such shares, held by each stockholder and (for shares other than Common Stock) the number of shares of Common Stock (if any) into which such shares are convertible, immediately prior to the Closing. Section 2.6(b) of the Schedule of Exceptions also indicates all outstanding shares of Common Stock that constitute restricted stock or that are otherwise subject to a repurchase or redemption right, indicating the name of the applicable stockholder, the vesting schedule (including any acceleration provisions with respect thereto), and the repurchase price payable by the Company. All of the issued and outstanding shares of capital stock of the Company have been duly authorized and validly issued and are fully paid and nonassessable. All of the issued and outstanding shares of capital stock of the Company have been offered, issued and sold by the Company in compliance with all applicable federal and state securities laws.

(c) Section 2.6(c) of the Schedule of Exceptions includes a complete and accurate list, as of the date of this Agreement of: (i) all stock option plans and other stock or equity-related plans of the Company (the "***Company Stock Plans***"), indicating for each Company Stock Plan the number of shares of Common Stock issued to date under such Plan, the number of shares subject to outstanding options under such Plan and the number of shares reserved for future issuance under such Plan; (ii) all holders of outstanding options to purchase shares of Common Stock

("***Company Stock Options***"), indicating with respect to each Company Stock Option the Company Stock Plan under which it was granted, the number of shares of Common Stock subject to such Company Stock Option, the exercise price, the date of grant and the vesting schedule (including any acceleration provisions with respect thereto); and (iii) all holders of warrants or other rights (other than Company Stock Options and convertible preferred stock) to purchase or acquire shares of capital stock of the Company (collectively, the "***Company Warrants***"), indicating with respect to each Company Warrant the agreement or other document under which it was granted, the number of shares of capital stock, and the class or series of such shares, subject to such Company Warrant, the exercise price, the date of issuance and the expiration date thereof. The Company has furnished to the Investor complete and accurate copies of all Company Stock Plans, forms of all stock option agreements evidencing Company Stock Options and all Company Warrants. All of the shares of capital stock of the Company subject to Company Stock Options and Company Warrants will be, upon issuance pursuant to the exercise of such instruments, duly authorized, validly issued, fully paid and nonassessable.

(d) Except as set forth in Section 2.6(c) and Section 2.6(d) of the Schedule of Exceptions, (i) no subscription, warrant, option, convertible security or other right (contingent or otherwise) to purchase or acquire any shares of capital stock of the Company is authorized or outstanding, (ii) the Company has no obligation (contingent or otherwise) to issue any subscription, warrant, option, convertible security or other such right, or to issue or distribute to holders of any shares of its capital stock any evidences of indebtedness or assets of the Company, (iii) the Company has no obligation (contingent or otherwise) to purchase, redeem or otherwise acquire any shares of its capital stock or any interest therein or to pay any dividend or to make any other distribution in respect thereof, and (iv) there are no outstanding or authorized stock appreciation, phantom stock or similar rights with respect to the Company.

(e) Except as set forth in Section 2.6(e) of the Schedule of Exceptions, there is no agreement, written or oral, between the Company and any holders of its securities, or, to the best of the Company's knowledge, among any holder of its securities, relating to the sale or transfer (including without limitation agreements relating to rights of first refusal, co sale rights or "drag along" rights), registration under the Securities Act, or voting, of the capital stock of the Company.

2.7 ***Financial Statements***. The Company has furnished to the Investor a complete and accurate copy of (a) the audited balance sheet of the Company at December 31, 2014 (the "***Balance Sheet Date***") and the related audited statement of operations for the fiscal year then ended (collectively, the "***Financial Statements***"). The Financial Statements are in accordance with the books and records of the Company and present fairly the financial condition and results of operations of the Company, at the dates and for the periods indicated.

2.8 ***Material Adverse Change***. Except as set forth in Section 2.8 of the Schedule of Exceptions, since the Balance Sheet Date, there has not been:

(a) any change in the assets, liabilities, financial condition or operating results of the Company from that reflected in the Financial Statements, except changes in the ordinary course of business that have not caused, in the aggregate, a Company Material Adverse Effect;

(b) any damage, destruction or loss, whether or not covered by insurance, that would have a Company Material Adverse Effect;

(c) any waiver or compromise by the Company of a valuable right or of a material debt owed to it;

(d) any satisfaction or discharge of any lien, claim, or encumbrance or payment of any obligation by the Company, except in the ordinary course of business and the satisfaction or discharge of which would not have a Company Material Adverse Effect;

(e) any material change to a material contract or agreement by which the Company or any of its assets is bound or subject;

(f) any material change in any compensation arrangement or agreement with any employee, officer, director or stockholder;

(g) any resignation or termination of employment of any officer or Key Employee of the Company;

(h) any mortgage, pledge, transfer of a security interest in, or lien, created by the Company, with respect to any of its material properties or assets, except liens for taxes not yet due or payable and liens that arise in the ordinary course of business and do not materially impair the Company's ownership or use of such property or assets;

(i) any loans or guarantees made by the Company to or for the benefit of its employees, officers or directors, or any members of their immediate families, other than travel advances and other advances made in the ordinary course of its business;

(j) any declaration, setting aside or payment or other distribution in respect of any of the Company's capital stock, or any direct or indirect redemption, purchase, or other acquisition of any of such stock by the Company;

(k) any sale, assignment or transfer of any Company Intellectual Property that could reasonably be expected to result in a Company Material Adverse Effect;

(l) receipt of notice that there has been a loss of, or material order cancellation by, any major customer of the Company;

(m) to the Company's knowledge, any other event or condition of any character, other than events affecting the economy or the Company's industry generally, that could reasonably be expected to result in a Company Material Adverse Effect; or

(n) any arrangement or commitment by the Company to do any of the things described in this Section 2.8.

2.9 ***No Undisclosed Liabilities***. Except as set forth in Section 2.9 of the Schedule of Exceptions, the Company does not have any liability (whether known or unknown and whether absolute or contingent), except for (a) liabilities shown expressly, or included in amounts shown, on

the Balance Sheet, (b) liabilities less than $250,000 on an individual basis, which have arisen since the Balance Sheet Date in the ordinary course of business and which are similar in nature and amount to the liabilities which arose during the comparable period of time in the immediately preceding fiscal period and (c) contractual liabilities incurred in the ordinary course of business which are not required by GAAP to be reflected on a balance sheet and which would not, either individually or in the aggregate, have or result in a Company Material Adverse Effect.

2.10 ***Governmental Consents***. No consent, approval, order or authorization of, or registration, qualification, designation, declaration or filing with, any court, arbitrational tribunal, administrative agency or commission or other governmental or regulatory authority or agency (each of the foregoing is hereafter referred to as a "***Governmental Entity***") is required on the part of the Company in connection with the offer, issuance, sale and delivery of the Shares, as contemplated by this Agreement, except such filings as shall have been made prior to and shall be effective on and as of the Closing and such filings required to be made after the Closing under applicable federal and state securities laws, all of which filings are specified in the Schedule of Exceptions. Based on the representations made by the Investor in Section 3 of this Agreement, the offer and sale of the Shares to the Investor will be in compliance with applicable federal and state securities laws.

2.11 ***Actions Pending***. There is no action, suit or proceeding, or governmental inquiry or investigation, pending, or, to the best of the Company's knowledge, any basis therefor or threat thereof, against the Company or any officer, director or Key Employee of the Company, which questions the validity of this Agreement or the right of the Company to enter into such agreement or to consummate the transactions contemplated hereby. There is no litigation pending, or, to the best of the Company's knowledge, any basis therefor or threat thereof, against the Company or any of its employees by reason of the past employment relationships of any of the employees, the proposed activities of the Company, or negotiations by the Company with possible investors in the Company. The Company is not subject to any outstanding judgment, order or decree.

2.12 ***Foreign Corrupt Practices Act, OFAC and Anti-Money Laundering***.

(a) None of the Company, its subsidiaries or, to the knowledge of the Company, any of the Company's directors, officers, employees or agents has taken any action, directly or indirectly, that would result in a violation by such persons of the Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (the "***FCPA***"), including, without limitation, making use of the mails or any means or instrumentality of interstate commerce corruptly in furtherance of an offer, payment, promise to pay or authorization of the payment of any money, or other property, gift, promise to give, or authorization of the giving of anything of value to any "foreign official" (as such term is defined in the FCPA) or any foreign political party or official thereof or any candidate for foreign political office, in contravention of the FCPA and the Company and its subsidiary have conducted their businesses in compliance with the FCPA and have instituted and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

(b) Neither the Company nor any of its subsidiaries nor, to the knowledge of the Company, any director, officer, agent, employee, or person acting on behalf of the Company or any subsidiary is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("***OFAC***"), and the Company will not directly or

indirectly use the proceeds of the sale of the Shares, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity, towards any sales or operations in Cuba, Iran, Syria, Sudan, Myanmar or any other country sanctioned by OFAC or for the purpose of financing the activities of any person currently subject to any U.S. sanctions administered by OFAC.

(c) The operation of each of the Company and its subsidiaries are and have been conducted at all times in compliance with the money laundering statues of applicable jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any applicable governmental agency (collectively, the "***Money Laundering Laws***"), and no action suit or proceeding by or before any court of governmental agency, authority or body or any arbitrator involving the Company and/or any subsidiary with respect to the Money Laundering Laws is pending, or to the Company's knowledge, threatened.

2.13 ***Data Privacy***. In connection with its collection, storage, transfer (including, without limitation, any transfer across national borders) and/or use of any personally identifiable information from any individuals, including, without limitation, any customers, prospective customers, employees and/or other third parties (collectively "***Personal Information***"), the Company is and has been in compliance with all applicable laws in all relevant jurisdictions, the Company's privacy policies and the requirements of any contract or codes of conduct to which the Company is a party. The Company has commercially reasonable physical, technical, organizational and administrative security measures and policies in place to protect all Personal Information collected by it or on its behalf from and against unauthorized access, use and/or disclosure. The Company is and has been in compliance in all material respects with all laws relating to data loss, theft and breach of security notification obligations

2.14 ***Compliance with Law***. The Company has, in all material respects, complied with all laws, regulations and orders applicable to its present and proposed business and has all material permits and licenses required thereby. There is no term or provision of any mortgage, indenture, contract, agreement or instrument to which the Company is a party or by which it is bound, or, to the best of the Company's knowledge, of any provision of any state or federal judgment, decree, order, statute, rule or regulation applicable to or binding upon the Company, which materially adversely affects or, so far as the Company may now foresee, in the future is reasonably likely to materially adversely affect the Company. To the best of the Company's knowledge, no employee of the Company is in violation of any term of any contract or covenant (either with the Company or with another entity) relating to employment, patents, assignment of inventions, proprietary information disclosure, non-competition or non-solicitation.

2.15 ***Exemption from Registration, Valid Issuance***. Subject to, and in reliance on, the representations, warranties and covenants made herein by the Investor, the issuance and sale of the Shares in accordance with the terms and on the bases of the representations and warranties set forth in this Agreement, may and shall be properly issued pursuant to Section 4(a)(2) of the Securities Act, Regulation D promulgated pursuant to the Act ("***Regulation D***") and/or any other applicable federal and state securities laws. The sale and issuance of the Shares pursuant to, and the Company's performance of its obligations under, this Agreement will not (i) result in the creation or imposition of any liens, charges, claims or other encumbrances upon the Shares or any of the assets of the

Company, or (ii) except as set forth in Section 2.15 of the Schedule of Exceptions, entitle the holders of any outstanding shares of capital stock of the Company to preemptive or other rights to subscribe to or acquire the Shares or other securities of the Company.

2.16 ***Taxes***.

(a) For purposes of this Agreement: (i) "**Tax**" or "**Taxes**" means all taxes, charges, fees, levies or other similar assessments or liabilities, including without limitation income, gross receipts, ad valorem, premium, value-added, excise, real property, personal property, sales, use, transfer, withholding, employment, unemployment insurance, social security, business license, business organization, environmental, workers compensation, payroll, profits, license, lease, service, service use, severance, stamp, occupation, windfall profits, customs, duties, franchise and other taxes imposed by the United States of America or any state, local or foreign government, or any other Governmental Entity, and any interest, fines, penalties, assessments or additions to tax resulting from, attributable to or incurred in connection with any tax or any contest or dispute thereof, and any liability for the payment of the foregoing as a result of being a member of an affiliated, combined, consolidated or unitary group for any period, as a result of any tax sharing or tax allocation agreement, arrangement or understanding, or as a result of being liable for another person's taxes as a transferee or successor, by contractual obligation or otherwise; and (ii) "**Tax Returns**" means all reports, returns, declarations, statements or other information, including any schedule or attachment thereto, required to be supplied to a taxing authority in connection with Taxes and any amendment thereof.

(b) The amount shown on the Balance Sheet as provision for Taxes is sufficient in all material respects for the payment of all unpaid Taxes, whether or not disputed, for all periods ending on or before the date thereof. The Company has timely filed or obtained presently effective extensions with respect to all Tax Returns that are or were required to be filed by it, and such Tax Returns are complete and accurate in all material respects. All Taxes have been timely paid, whether or not shown on such Tax Returns. All Taxes that the Company is or was required by law to have withheld or collected have been duly withheld or collected and, to the extent required, have been timely paid to the proper Governmental Entity, and the Company has complied with all related recordkeeping requirements. The Tax Returns of the Company have not been audited by any Governmental Entity, the Company has not agreed to any waivers of statutes of limitations with respect to Taxes, and no controversy with respect to Taxes is pending or, to the best of the Company's knowledge, threatened. No claim has ever been made by any Governmental Entity in a jurisdiction where the Company does not file Tax Returns that the Company is or may be subject to taxation by that jurisdiction, and, to the Company's knowledge, there is no basis for any such claim to be made. Neither the Company nor any of its stockholders has ever filed an election pursuant to Section 1362 of the Internal Revenue Code of 1986, as amended (the "***Code***"), that the Company be taxed as an S corporation. The Company's net operating losses, as set forth in the Financial Statements, are not subject to any limitations imposed by Section 382 of the Code or comparable provisions of state, local, or foreign law, and consummation of the transactions contemplated by this Agreement or by any other agreement, understanding or commitment, contingent or otherwise, to which the Company is a party or by which it is otherwise bound will not have the effect of limiting the Company's ability to use such net operating losses in full to offset taxable income. The Company does not have any liabilities for Taxes of any other person or entity by contract, as a transferee or successor, under U.S. Treasury Regulation section 1.1502-6 or analogous state, county, local or foreign provision or otherwise.

(c) The Company is not now and has never been a "United States real property holding corporation" as defined in Section 897(c)(2) of the Code and the Treasury Regulations thereunder.

2.17 ***Investment Company***. The Company is not an investment company within the meaning of the Investment Company Act of 1940, as amended.

2.18 ***Shell Company***. The Company is not, and has never been, an issuer identified in Rule 144(i)(1) promulgated under the Securities Act

2.19 ***Brokers***. Except as set forth in Section 2.19 of the Schedule of Exceptions, no brokers, finders or financial advisory fees or commissions will be payable by the Company or any of its subsidiaries in respect of the transactions contemplated by this Agreement.

2.20 ***Property and Assets***. The Company has good title to, or a valid leasehold interest in, all of its material properties and assets, including all properties and assets reflected in the Balance Sheet, except those disposed of since the date thereof in the ordinary course of business, and none of such properties or assets is subject to any Security Interest other than those the material terms of which are described in the Balance Sheet or in the Schedule of Exceptions.

2.21 ***Intellectual Property***.

(a) The Schedule of Exceptions includes a complete and accurate list of (i) each patent, patent application, copyright registration or application therefor, and trademark, service mark and domain name registration or application therefor of the Company and (ii) each Product Candidate (as defined below) owned or in-licensed by the Company.

(b) To the best of the Company's Knowledge, the Company is the owner, licensee or has the right to use all Company Intellectual Property (as defined below) necessary (i) to research, develop, use, manufacture, market and sell the Product Candidates and (ii) to operate the Internal Systems (as defined below). The Company has taken all reasonable measures to protect the proprietary nature of each item of Company Intellectual Property (as defined below), and to maintain in confidence all trade secrets and confidential information, that it owns or uses. To the best of the Company's Knowledge, (i) the patents and patent applications that constitute Company Intellectual Property have been prepared, filed and prosecuted in accordance with all applicable laws and regulations and (ii) any issued patents that constitute Company Intellectual Property are valid or enforceable. To the best of the Company's Knowledge, no other person or entity has any rights to any of the Company Intellectual Property owned by the Company (except pursuant to agreements or licenses specified in the Schedule of Exceptions), and no other person or entity is infringing, violating or misappropriating any of the Company Intellectual Property. To the best of the Company's Knowledge, there are no pending or threatened legal or governmental proceedings relating to any Company Intellectual Property, other than ex parte examination proceedings before the US Patent and Trademark Office or ex parte examination proceedings or oppositions before corresponding foreign patent offices.

(c) To the best of the Company's Knowledge, as of the date of this Agreement, none of the Product Candidates, or the research, development, manufacture, marketing, sale, offer to sell, importation, provision or use thereof, infringes or would infringe, or violates or would violate, or constitutes or would constitute a misappropriation of, any Intellectual Property rights of any person or entity. To the best of the Company's Knowledge, none of the Internal Systems, or the use thereof, infringes or violates, or constitutes a misappropriation of, any Intellectual Property rights of any person or entity. The Schedule of Exceptions lists any complaint, claim or notice, or written threat thereof, received by the Company alleging any such infringement, violation or misappropriation; and the Company has provided to the Investor complete and accurate copies of all written documentation in the possession of the Company relating to any such complaint, claim, notice or threat. The Company has furnished to the Investor complete and accurate copies of all written documentation in the Company's possession relating to claims or disputes (including without limitation as to validity, inventorship, ownership or enforceability) known to the Company concerning any Company Intellectual Property.

(d) The Schedule of Exceptions identifies each license or other agreement, including material transfer agreements, pursuant to which the Company has licensed, distributed or otherwise granted any rights to any third party or which the licensor or inventor has granted any rights with respect to, any Company Intellectual Property. Except as described in the Schedule of Exceptions, the Company has not agreed to indemnify any person or entity against any infringement, violation or misappropriation of any Intellectual Property rights with respect to any Company Intellectual Property.

(e) The Schedule of Exceptions identifies each item of Company Intellectual Property that is owned by a party other than the Company, and the license or agreement pursuant to which the Company uses it (excluding off-the-shelf software programs licensed by the Company pursuant to "shrink wrap" or "click through" licenses).

(f) All of the copyrightable materials incorporated in, underlying or used with the Company Intellectual Property have been created by employees of the Company within the scope of their employment by the Company or by independent contractors of the Company who have executed agreements expressly assigning all right, title and interest in such copyrightable materials to the Company. No portion of such copyrightable materials was jointly developed with any third party.

(g) For purposes of this Agreement (except for the knowledge definition below, which shall be applicable solely to this Section 2.21), the following terms shall have the following meanings:

(i) "***Company Intellectual Property***" shall mean the Intellectual Property owned by or licensed to the Company and incorporated in, underlying or used in connection with the Product Candidates or the Internal Systems, including, without limitation, the patent and trademark rights identified in the Schedule of Exceptions.

(ii) "***Intellectual Property***" shall mean all: (A) patents, patent applications, patent disclosures and all related continuation, continuation-in-part, divisional, reissue, reexamination, utility model, certificate of invention and design patents, patent applications,

registrations and applications for registrations; (B) trademarks, service marks, trade dress, Internet domain names, logos, trade names and corporate names and registrations and applications for registration thereof; (C) copyrights and registrations and applications for registration thereof; (D) computer software, data and documentation; (E) inventions, trade secrets and confidential business information, whether patentable or nonpatentable and whether or not reduced to practice, know-how, manufacturing and product processes and techniques, formulae, research and development information, copyrightable works, financial, marketing and business data, pricing and cost information, business and marketing plans and customer and supplier lists and information; (F) other proprietary rights relating to any of the foregoing (including remedies against infringements thereof and rights of protection of interest therein under the laws of all jurisdictions); and (G) copies and tangible embodiments thereof.

(iii) "***Internal Systems***" shall mean the internal systems of the Company that are used in its business or operations, including, computer hardware systems, software applications and embedded systems.

(iv) "***Key Employees***" shall mean the following officers: Dirk G. Brockstedt, Thomas Dubensky, Jr., Stephen T. Isaacs, Jennifer Lew and Gregory Schafer.

(v) "***Knowledge***," including the phrase "***to the Company's Knowledge***," shall mean the actual knowledge after reasonable investigation of the Key Employees.

(vi) "***Product Candidates***" shall mean (A) the therapeutic vaccines and other products that the Company (1) currently develops, manufactures, markets, sells or licenses or (2) currently plans to develop, manufacture, market, sell or license in the future and (B) the services that the Company (1) currently provides or (2) currently plans to provide in the future.

2.22 ***Insurance***. The Company maintains valid policies of workers' compensation insurance and of insurance with respect to its properties and business of the kinds and in the amounts not less than is customarily obtained by corporations of established reputation engaged in the same or similar business and similarly situated, including, without limitation, insurance against loss, damage, fire, theft, public liability and other risks.

2.23 ***Material Contracts and Obligations***. The Schedule of Exceptions sets forth a list of all material agreements or commitments of any nature (whether written or oral) to which the Company is a party or by which it is bound, including without limitation (a) any agreement which requires future expenditures by the Company in excess of $500,000 or which might result in payments to the Company in excess of $500,000, (b) any employment agreement, employee benefit, bonus, pension, profit-sharing, stock option, stock purchase or similar plan or arrangement, (c) any distributor, sales representative or similar agreement, (d) any agreement with any current or former stockholder, officer or director of the Company, or any "affiliate" or "associate" of such persons (as such terms are defined in the rules and regulations promulgated under the Securities Act), including without limitation any agreement or other arrangement providing for the furnishing of services by, rental of real or personal property from, or otherwise requiring payments to, any such person or entity, (e) any agreement under which the Company is restricted from carrying on any business anywhere in the world, (f) any agreement relating to indebtedness for borrowed money, (g) any agreement for the disposition of a material portion of the Company's assets (other than for the sale

of inventory in the ordinary course of business), (h) any agreement for the acquisition of the business or securities or other ownership interests of another party, (i) any agreement for the license of any patent, copyright, trademark, trade secret or other proprietary right to or from the Company (other than licenses by the Company of "off the shelf" or other commercially available standard products) or (j) any other agreement that is material to the operations, business or finances of the Company. The Company has furnished to the Investor copies of the foregoing agreements (or an accurate summary of any oral agreement). All of such agreements and contracts are valid, binding against the Company and in full force and effect. Neither the Company, nor, to the best of the Company's knowledge, any other party thereto, is in default of any of its obligations under any of the agreements or contracts listed in the Schedule of Exceptions.

2.24 ***Employees***.

(a) All current and former employees of the Company have executed and delivered Confidential Information and Inventions Assignments and Non-Solicitation Agreements in the form of Exhibit A and all of such agreements are in full force and effect. All current and former consultants of the Company that have performed development work or provided technical services to the Company or have otherwise had access to confidential or proprietary information of the Company have executed and delivered non-disclosure and assignment of inventions agreements copies of which have been made available to the Investor, and all of such agreements are in full force and effect.

(b) The Company is not aware that any employee of the Company has plans to terminate his or her employment relationship with the Company. Except as set forth in Section 2.24(b) of the Schedule of Exceptions, all employees of the Company are engaged by the Company on a full time basis. The Company has complied in all material respects with all applicable laws relating to wages, hours, equal opportunity, collective bargaining, workers' compensation insurance and the payment of social security and other Taxes. None of the employees of the Company is represented by any labor union, and there is no labor strike or other labor trouble pending with respect to the Company (including, without limitation, any organizational drive) or, to the best of the Company's knowledge, threatened. The Schedule of Exceptions sets forth a list of all agreements between any officer of the Company and a previous employer of such person that contains non-competition or non-solicitation covenants. The Company has furnished to the Investor copies of such agreements. To the Company's knowledge, no employee of the Company is obligated under any contract or subject to any judgment, decree or administrative order that would conflict or interfere with (i) the performance of the employee's duties as an employee, director or officer of the Company, or (ii) the Company's business as conducted or proposed to be conducted.

(c) The Schedule of Exceptions sets forth (i) the annual salary, (ii) any bonus arrangements and (iii) rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock of each of the Key Employees.

2.25 ***ERISA***. Except as set forth in Section 2.25 of the Schedule of Exceptions, the Company does not have or otherwise contribute to or participate in any employee benefit plan subject to the Employee Retirement Income Security Act of 1974, as amended, other than a medical benefit plan with respect to which the Company has made all required contributions and has complied with all applicable laws.

2.26 ***Books and Records***. The minute books of the Company contain complete and accurate records of all meetings and other corporate actions of its stockholders and its Board of Directors and committees thereof. The stock ledger of the Company is complete and accurate and reflects all issuances, transfers, repurchases and cancellations of shares of capital stock of the Company.

2.27 ***Permits***. The Schedule of Exceptions sets forth a list of all material permits, licenses, registrations, certificates, orders or approvals from any Governmental Entity ("***Permits***") issued to or held by the Company. Such listed Permits are the only Permits that are required for the Company to conduct its business as presently or proposed to be conducted, except for those the absence of which would not have a Company Material Adverse Effect. Each such Permit is in full force and effect and, to the best of the Company's Knowledge, no suspension or cancellation of such Permit is threatened and there is no basis for believing that such Permit will not be renewable upon expiration

2.28 ***Environmental Matters***.

(a) The Company has complied with all applicable Environmental Laws (as defined below). There is no pending or, to the best of the Company's knowledge, threatened civil or criminal litigation, written notice of violation, formal administrative proceeding, or investigation, inquiry or information request by any Governmental Entity, relating to any Environmental Law involving the Company. For purposes of this Agreement, "***Environmental Law***" shall mean any federal, state or local law, statute, rule or regulation or the common law relating to the environment or occupational health and safety, including any statute, regulation, administrative decision or order pertaining to (i) treatment, storage, disposal, generation and transportation of industrial, toxic or hazardous materials or substances or solid or hazardous waste; (ii) air, water and noise pollution; (iii) groundwater and soil contamination; (iv) the release or threatened release into the environment of industrial, toxic or hazardous materials or substances, or solid or hazardous waste, including emissions, discharges, injections, spills, escapes or dumping of pollutants, contaminants or chemicals; (v) the protection of wildlife, marine life and wetlands, including all endangered and threatened species; (vi) storage tanks, vessels, containers, abandoned or discarded barrels and other closed receptacles; (vii) health and safety of employees and other persons; and (viii) manufacturing, processing, using, distributing, treating, storing, disposing, transporting or handling of materials regulated under any law as pollutants, contaminants, toxic or hazardous materials or substances or oil or petroleum products or solid or hazardous waste. As used above, the terms "**release**" and "**environment**" shall have the meaning set forth in the federal Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended ("***CERCLA***"), provided that the term "***release***" shall not include the definitional exclusions of CERCLA and the term "***environment***" shall not include the United States jurisdictional limitations of CERCLA and shall include the indoor environment.

(b) The Company has no liabilities or obligations arising from the release of any Materials of Environmental Concern (as defined below) into the environment. For purposes of this Agreement, "***Materials of Environmental Concern***" shall mean any chemicals, pollutants or

contaminants, hazardous substances (as such term is defined under CERCLA), solid wastes and hazardous wastes (as such terms are defined under the Resource Conservation and Recovery Act), toxic materials, oil or petroleum and petroleum products or any other material subject to regulation under any Environmental Law.

(c) The Company is not a party to or bound by any court order, administrative order, consent order or other agreement between the Company and any Governmental Entity entered into in connection with any legal obligation or liability arising under any Environmental Law.

(d) The Company is not aware of any material environmental liability of any solid or hazardous waste transporter or treatment, storage or disposal facility that has been used by the Company.

(e) Set forth in the Schedule of Exceptions is a list of all documents (whether in hard copy or electronic form) that contain any environmental reports, investigations and audits relating to premises currently or previously owned or operated by the Company (whether conducted by or on behalf of the Company or a third party, and whether done at the initiative of the Company or directed by a Governmental Entity or other third party) which the Company has possession of or access to. A complete and accurate copy of each such document has been provided to the Investor.

2.29 ***Disclosure.*** Neither this Agreement nor any Exhibit hereto, nor any report, certificate or instrument furnished by the Company to any of the Investor or its counsel in connection with the transactions contemplated by this Agreement, when read together, contains or will contain any untrue statement of a material fact or omits or will omit to state a material fact necessary in order to make the statements contained herein or therein, in light of the circumstances under which they were made, not misleading.

2.30 ***Bad Actors Matters***. Neither the Company nor, to the Company's knowledge, any of its officers, directors or other affiliates covered under Rule 506(d)(1) promulgated under the Securities Act (excluding for such purposes the Investor) meet any of the disqualifying criteria described in Rule 506(d)(1)(i) through (viii) promulgated under the Securities Act.

SECTION 3

Representations and Warranties of the Investor

The Investor hereby represents and warrants the following as of the date hereof and as of the Closing Date:

3.1 ***Experience***. The Investor has carefully reviewed the representations concerning the Company contained in this Agreement and has sufficient knowledge and experience in finance and business that it is capable of evaluating the risks and merits of its investment in the Company and the Investor is able financially to bear the risks thereof.

3.2 ***Investment***. The Investor is acquiring the Shares for investment for the Investor's own account and not with the view to, or for resale in connection with, any distribution thereof. The Investor understands that the Shares are being issued in a transaction that has not been and will not be registered under the Securities Act by reason of a specific exemption from the registration provisions of the Securities Act which depends upon, among other things, the bona fide nature of the investment intent as expressed herein. The Investor further represents that it does not have any contract, undertaking, agreement or arrangement with any person to sell, transfer or grant participation to any third person with respect to any of the Shares.

3.3 ***Rule 144***. The Investor acknowledges that the Shares must be held indefinitely unless subsequently registered under the Securities Act or an exemption from such registration is available. The Investor is aware of the provisions of Rule 144 promulgated under the Securities Act which permit limited resale of shares purchased in a private placement subject to the satisfaction of certain conditions. In connection therewith, the Investor acknowledges that the Company will make a notation on its stock books regarding the restrictions on transfers set forth in this Section 3 and will transfer the Shares on the books of the Company only to the extent not inconsistent therewith.

3.4 ***Access to Information***. The Investor has received and reviewed information about the Company and has had an opportunity to discuss the Company's business, management and financial affairs with its management and to review the Company's facilities. The Investor has had a full opportunity to ask questions of and receive answers from the Company, or any person or persons acting on behalf of the Company, concerning the terms and conditions of an investment in the Shares. In connection with the purchase of the Shares hereunder, the Investor is not relying upon, and has not relied upon, any statement, representation or warranty made by any person, except for the statements, representations and warranties contained in this Agreement.

3.5 ***Authorization***. The Investor has full power and authority to enter into and to perform this Agreement in accordance with its terms. The Investor represents that it has not been organized, reorganized or recapitalized specifically for the purpose of investing in the Company. This Agreement has been duly executed and delivered by the Investor and constitutes a valid and binding obligation of the Investor enforceable against the Investor in accordance with their respective terms.

3.6 ***Investor Status***. The Investor acknowledges that it is either (i) an institutional "accredited investor" as defined in Rule 501(a) of Regulation D of the Securities Act (an "***Institutional Accredited Investor***") or (ii) a "qualified institutional buyer" as defined in Rule 144A of the Securities Act, as indicated on Schedule A hereto, and the Investor shall submit to the Company such further assurances of such status as may be reasonably requested by the Company.

3.7 ***No Inducement***. The Investor was not induced to participate in the offer and sale of the Shares by the filing of any registration statement in connection with any public offering of the Company's securities, and the Investor's decision to purchase the Shares hereunder was not influenced by the information contained in any such registration statement.

SECTION 4

Conditions to Investor's Obligations at Closing

The obligations of the Investor under this Agreement are subject to the fulfillment on or before the Closing of each of the following conditions, any of which may be waived in writing by the Investor (except to the extent not permitted by law):

4.1 ***No Injunction, etc***. No preliminary or permanent injunction or other binding order, decree or ruling issued by a court or governmental agency shall be in effect which shall have the effect of preventing the consummation of the transactions contemplated by this Agreement. No action or claim shall be pending before any court or quasi-judicial or administrative agency of any federal, state, local or foreign jurisdiction or before any arbitrator wherein an unfavorable injunction, judgment, order, decree, ruling or charge would be reasonably likely to (i) prevent consummation of any of the transactions contemplated by this Agreement, (ii) cause any of the transactions contemplated by this Agreement to be rescinded following consummation or (iii) have the effect of making illegal the purchase of, or payment for, any of the Shares by the Investor.

4.2 ***Representations and Warranties***. The representations and warranties of the Company contained in Section 2 shall have been true and correct in all material respects (except for such representations and warranties that are qualified by materiality, which shall be true and correct in all respects) on and as of the Closing Date with the same effect as though such representations and warranties had been made on and as of such date, except to the extent expressly made as of a specified date, which shall be true and correct as of such date.

4.3 ***Performance***. The Company shall have performed and complied with all covenants, agreements, obligations and conditions contained in this Agreement that are required to be performed or complied with by it on or before the Closing Date.

4.4 ***Compliance Certificate***. A duly authorized officer of the Company shall deliver to the Investor at the Closing a certificate stating that the conditions specified in Sections 4.2 and 4.3 have been fulfilled and certifying and attaching the Company's Certificate of Incorporation, Bylaws and authorizing Board of Directors resolutions with respect to this Agreement and the transactions contemplated hereby.

4.5 ***Securities Laws***. The offer and sale of the Shares to the Investor pursuant to this Agreement shall be exempt from the registration requirements of the Securities Act and the registration and/or qualification requirements of all applicable state securities laws.

4.6 ***Authorizations***. All authorizations, approvals or permits, if any, of any governmental authority or regulatory body that are required in connection with the lawful issuance and sale of the Shares pursuant to this Agreement shall have been duly obtained and shall be effective on and as of the Closing.

4.7 ***Legal Opinion***. The Investor shall have received a legal opinion from Cooley LLP substantially in form and substance reasonably acceptable to the Investor.

4.8 ***Effective Date.*** The Effective Date (as such term is described in the that certain Collaboration and License Agreement (the "***Collaboration Agreement***"), entered into as of March 12, 2015, between the Company and Novartis Pharmaceuticals Corporation) shall have occurred.

4.9 ***IPO***. The Company shall have consummated an IPO.

SECTION 5

Conditions to the Company's Obligations at Closing

The obligations of the Company to the Investor under this Agreement are subject to the fulfillment on or before the Closing of each of the following conditions by the Investor:

5.1 ***Representations and Warranties***. The representations and warranties of the Investor contained in Section 3 shall be true and correct in all material respects (except for such representations and warranties that are qualified by materiality which shall be true and correct in all respects) on and as of the Closing with the same effect as though such representations and warranties had been made on and as of the Closing.

5.2 ***Securities Law Compliance.*** The offer and sale of the Shares to the Investor pursuant to this Agreement shall be exempt from the registration requirements of the Securities Act and the registration and/or qualification requirements of all applicable state securities laws.

5.3 ***Authorization***. All authorizations, approvals or permits, if any, of any governmental authority or regulatory body that are required in connection with the lawful issuance and sale of the Shares pursuant to this Agreement shall have been duly obtained and shall be effective on and as of the Closing.

SECTION 6

Investor Covenants

6.1 ***Trading Restrictions***.

(a) Definitions.

(i) "**Affiliate**" shall have the meaning set forth in Rule 12b-2 of the regulations promulgated under the Securities Exchange Act of 1934, as amended (the "Exchange Act").

(ii) "**Restriction Period**" shall mean the period commencing on the Closing Date and continuing until the earlier of (A) the two year anniversary of the Closing Date and (B) the date upon which the Collaboration Agreement expires or is terminated in accordance with its terms.

(iii) "**Significant Event**" shall mean any of the following not involving a violation of this Section 6: (A) the public announcement of a proposal or intention to acquire, or the acquisition, by any person or 13D Group of beneficial ownership of Voting Securities representing 15% or more of the then outstanding Voting Securities, or all or substantially all of the assets of the Company; (B) the public announcement of a proposal or intention to commence, or the commencement, by any person or 13D Group of a tender or exchange offer to acquire Voting

Securities which, if successful, would result in such person or 13D Group owning, when combined with any other Voting Securities owned by such person or 13D Group, 15% or more of the then outstanding Voting Securities; (C) the entry into by the Company, or the public announcement by the Company of an intention or determination to enter into or commence or continue any discussions relating to, any merger, sale or other business combination transaction, or an agreement therefor, pursuant to which the outstanding shares of capital stock of the Company would be converted into cash, other consideration or securities of another person or 13D Group or 50% or more of the then outstanding shares of capital stock of the Company would be owned by persons other than the then current holders of shares of capital stock of the Company, or which would result in all or a substantial portion of the Company's assets being sold to any person or 13D Group, or (D) entering into an agreement or commencing a proxy solicitation in which a person or 13D Group would, if successful, elect, or acquire the ability to elect, a majority of the Board of Directors of the Company.

(iv) "**Voting Securities**" shall mean at any time shares of any class of capital stock of the Company which are then entitled to vote generally in the election of directors.

(v) "**13D Group**" shall mean, with respect to the Voting Securities of the Company, any group of persons formed for the purpose of acquiring, holding, voting or disposing of such Voting Securities which would be required under Section 13(d) of the Exchange Act and the rules and regulations thereunder to file a statement on Schedule 13D with the Commission as a "person" within the meaning of Section 13(d)(3) of the Exchange Act if such group beneficially owned Voting Securities representing more than 5% of the total combined voting power of all such Voting Securities then outstanding.

(b) Restriction Period No Sell. The Investor agrees that during the Restriction Period, neither the Investor nor any of its Affiliates shall offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise dispose of in any manner, either directly or indirectly ("***Sale***" or "***Sell***"), any Shares or any securities of the Company issued as a dividend or distribution on, or involving a recapitalization or reorganization with respect to, any of the Shares ("***Covenant Shares***"), other than transfers of securities between and among the Investor and any one or more of its Affiliates. The Company shall use commercially reasonable efforts to permit the Shares to be eligible for clearance and settlement through the facilities of The Depository Trust Company immediately following the termination of the Restriction Period.

(c) Post-Restriction Period Selling Restrictions. During the two years following the expiration of the Restriction Period:

(i) Neither the Investor nor its Affiliates shall Sell a number of Covenant Shares in any three-month period that collectively exceeds 25% of the aggregate Covenant Shares held by the Investor and its Affiliates as of the end of the Restriction Period; and

(ii) For any proposed Sale of 100,000 or more shares of Common Stock of the Company by the Investor or any of its Affiliates in any single transaction or series of related transactions (***"Proposed Sale Shares***"), the Investor shall give the Company at least 10 days prior written notice of such sale. If the Investor provides a notice as provided in the preceding sentence, during such 10-day period, the Company may seek to find a buyer for the Proposed Sale Shares. The limitations and obligations set forth in this Section 6.1(c) shall not apply to any Sale of Covenant Shares taking place between the Investor (and/or any of its Affiliates) and a single buyer; provided that the Investor shall give the Company at least 30 days prior written notice of such Sale.

This Section 6.1(c) shall terminate one year after the expiration or termination of the Collaboration Agreement in accordance with its terms, if such termination occurs prior to the one year anniversary of the expiration of the Restriction Period.

(d) Occurrence of Significant Event. The restrictions contained in Sections 6.1(b) and 6.1(c) shall be suspended and shall not apply to or otherwise restrict the Investor's actions in respect of the Company's securities for so long as a Significant Event has occurred and is continuing.

6.2 ***Invalid Transfers***. Any sale, assignment or other transfer of Covenant Shares by the Investor or any of its Affiliates, as applicable, contrary to the provisions of this Section 6 shall be null and void, and the transferee shall not be recognized by the Company as the holder or owner of the Covenant Shares sold, assigned, or transferred for any purpose (including, without limitation, voting or dividend rights), unless and until the Investor or such Affiliate, as applicable, has satisfied the requirements of this Section 6 with respect to such sale. The Company, or, at the instruction of the Company, the transfer agent of the Company, may place a legend on any certificate representing Covenant Shares stating that such shares are subject to the restrictions contained in this Agreement. Upon expiration of the Restriction Period, the Company agrees to facilitate the timely preparation and delivery (but in no event longer than three (3) business days) of certificates representing the Covenant Shares to be sold by the Investor or any Affiliate free of any restrictive legends and in such denominations and registered in such names as the Investor or such Affiliate may request in connection with such sale.

6.3 ***Performance by Affiliates***. The Investor shall remain responsible for and guarantee its Affiliates' performance in connection with this Agreement, and shall cause each such Affiliate to comply fully with the provisions of this Agreement in connection with such performance. The Investor hereby expressly waives any requirement that the Company exhaust any right, power or remedy, or proceed directly against such an Affiliate, for any obligation or performance hereunder, prior to proceeding directly against the Investor.

SECTION 7

Registration Rights

7.1 ***Rule 144 Reporting***. With a view to making available to the Investor the benefits of certain rules and regulations of the Commission which may permit the sale of the Shares to the public without registration, the Company agrees to use commercially reasonable efforts to:

(a) Make and keep public information available, as those terms are understood and defined in Rule 144 promulgated under the Securities Act;

(b) File with the Commission in a timely manner all reports and other documents required of the Company under the Exchange Act; and

(c) Furnish the Investor forthwith upon request (i) a written statement by the Company as to its compliance with the public information requirements of said Rule 144, (ii) a copy of the most recent annual or quarterly report of the Company, and (iii) such other reports and documents as may be reasonably requested in availing the Investor of any rule or regulation of the Commission permitting the sale of any such securities without registration.

7.2 ***Registration.***

(a) If, at the end of the Restriction Period, the Shares cannot be sold without restriction pursuant to Rule 144 promulgated under the Securities Act, then upon Investor's written request, received by the Company on or before the 30th day after the end of the Restriction Period, the Company will use commercially reasonable efforts to register the Shares for resale under the Securities Act on a Registration Statement on Form S-3 (the "***Registration Statement***"), filed within 90 days of such written request, and will use commercially reasonable efforts to have such Registration Statement promptly declared effective by the Commission.

(b) The Company will use commercially reasonable efforts to keep the Registration Statement continuously effective under the Securities Act until the earlier of (i) the date all of the Shares covered by such Registration Statement have been sold or can be sold publicly without restriction or limitation under Rule 144 or (ii) the date that is two years following the Closing Date.

(c) The Investor shall furnish to the Company such information regarding the Investor, and the distribution proposed by the Investor, as the Company may reasonably request in writing and as shall be required in connection with the Registration Statement.

(d) The Company shall pay all fees and expenses incident to the performance of or compliance with this Section 7.2 by the Company.

7.3 ***Restrictive Legend***.

(a) The certificates representing the Shares, when issued, will bear a restrictive legend in substantially the following form:

"THE SECURITIES EVIDENCED OR CONSTITUTED HEREBY HAVE BEEN ISSUED WITHOUT REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT") AND MAY NOT BE SOLD, OFFERED FOR SALE, TRANSFERRED, PLEDGED OR HYPOTHECATED WITHOUT REGISTRATION UNDER THE ACT UNLESS EITHER (i) THE COMPANY HAS RECEIVED AN OPINION OF COUNSEL, IN FORM AND SUBSTANCE REASONABLY SATISFACTORY TO THE COMPANY, TO THE EFFECT THAT REGISTRATION IS NOT REQUIRED IN CONNECTION WITH SUCH DISPOSITION OR (ii) THE SALE OF SUCH SECURITIES IS MADE PURSUANT TO RULE 144 PROMULGATED UNDER THE ACT."

(b) The certificates representing the Shares, when issued, shall not bear the restrictive legend set forth in Section 7.3(a): (i) following a sale of such Shares pursuant to a registration statement covering the resale of such Shares, while such registration statement is

effective under the Securities Act, (ii) following any sale of such Shares pursuant to Rule 144 promulgated under the Securities Act ("***Rule 144***"), (iii) if such Shares are eligible for sale under Rule 144, without the requirement for the Company to be in compliance with the current public information required under Rule 144 as to such Shares and without volume or manner-of-sale restrictions or (iv) if such legend is not required under applicable requirements of the Securities Act (including judicial interpretations and pronouncements issued by the staff of the Securities and Exchange Commission). The Company agrees that at such time as the restrictive legend set forth in Section 7.3(a) is no longer required under this section, the Company will (x) no later than five (5) business days following the delivery by the Investor to the Company or the Company's transfer agent of a certificate representing Shares issued with such restrictive legend, deliver or cause to be delivered to the Investor a certificate representing such Shares that is free from such restrictive legend, and (y), in the event that such shares are uncertificated, no later than five (5) business days following the delivery of a written request by the Investor to the Company to remove such restrictive legend, remove, or cause to be removed, any such restrictive legend in the Company's stock records. The Company may not make any notation on its records or give instructions to the Company's transfer agent that enlarge the restrictions on transfer set forth in Sections 6.2, 7.3(a) and 7.4.

7.4 ***"Lock-Up" Agreement; Confidentiality of Notices***. The Investor agrees, if requested by the Company and the managing underwriter of an IPO (but not for any subsequent offerings) (i) not to (a) offer, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any Shares or other securities of the Company (excluding securities acquired in the public market after the IPO) or (b) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of any Shares or other securities of the Company (excluding securities acquired in the public market after the IPO), whether any transaction described in clause (a) or (b) is to be settled by delivery of securities, in cash or otherwise, during the period beginning on the date of the filing of such registration statement with the Securities and Exchange Commission and ending on the date specified by the Company and the managing underwriter (such period not to exceed 180 days in the case of an IPO or such other period not to exceed 18 days after the expiration of the 180-day period, as may be requested by the Company or an underwriter to accommodate regulatory restrictions on (1) the publication or other distribution of research reports, and (2) analyst recommendations and opinions, including, but not limited to, the restrictions contained in FINRA Rule 2711(f)(4) or NYSE Rule 472(f)(4), or any successor provisions or amendments thereto), and (ii) to execute any agreement reflecting clause (i) above as may be requested by the Company or the managing underwriters at the time of such offering.

The Company may impose stop-transfer instructions with respect to the Registrable Shares or other securities subject to the foregoing restriction until the end of such "lock-up" period.

As a condition to the obligation of the Investor under this Section 7.4, any "lock-up" obligation of the Investor under this Section 7.4, and any agreement entered into by the Investor as a result of its obligations under this Section 7.4, shall allow for periodic early releases of portions of the securities subject to such "lock-up" obligations, which may be conditioned upon the trading price of the Company's Common Stock.

If the Investor receives any written notice from the Company regarding the Company's plans to file a Registration Statement, the Investor shall treat such notice confidentially and shall not disclose such information to any person other than as necessary to exercise its rights under this Agreement.

SECTION 8

Conversion to Series E Preferred Stock Financing

In the event that the IPO has not occurred prior to December 15, 2015, then this Agreement shall be automatically, and without further action of either party hereto, be amended and restated in in its entirety to read in the form attached hereto as Exhibit B, with the Closing to occur on or before December 31, 2015 (subject to the terms and conditions set forth therein).

SECTION 9

Indemnification

Each party (an "***Indemnifying Party***") hereby indemnifies and holds harmless the other party, such other party's respective officers, directors, employees, consultants, representatives and advisers, and any and all Affiliates (as defined in the Series E Preferred Stock Purchase Agreement, by and between the Company and the Investor, of even date herewith (the "***Series E Preferred Stock Purchase Agreement***")) of the foregoing (each of the foregoing, an "***Indemnified Party***") from and against all losses, liabilities, costs, damages and expense (including reasonable legal fees and expenses) (collectively, "***Losses***") suffered or incurred by any such Indemnified Party to the extent arising from, connected with or related to (i) breach of any representation or warranty of such Indemnifying Party in this Agreement; and (ii) breach of any covenant or undertaking of any Indemnifying Party in this Agreement. If an event or omission (including, without limitation, any claim asserted or action or proceeding commenced by a third party) occurs which an Indemnified Party asserts to be an indemnifiable event pursuant to this Section 8, the Indemnified Party will provide written notice to the Indemnifying Party, setting forth the nature of the claim and the basis for indemnification under this Agreement. The Indemnified Party will give such written notice to the Indemnifying Party immediately after it becomes aware of the existence of any such event or occurrence. Such notice will be a condition precedent to any obligation of the Indemnifying Party to act under this Agreement but will not relieve it of its obligations under the indemnity except to the extent that the failure to provide prompt notice as provided in this Agreement prejudices the Indemnifying Party with respect to the transactions contemplated by this Agreement and to the defense of the liability. In case any such action is brought by a third party against any Indemnified Party and it notifies the Indemnifying Party of the commencement thereof, the Indemnifying Party will be entitled to participate therein and, to the extent that it wishes, to assume the defense and settlement thereof with counsel reasonably selected by it and, after notice from the Indemnifying Party to the Indemnified Party of such election so to assume the defense and settlement thereof, the Indemnifying Party will not be liable to the Indemnified Party for any legal expenses of other counsel or any other expenses subsequently incurred by such Indemnified Party in connection with the defense thereof, provided, however, that an Indemnified Party shall have the right to employ separate counsel at the expense of the Indemnifying Party if (i) the employment thereof has been

specifically authorized in writing by the Indemnifying Party; or (ii) representation of both parties by the same counsel would be inappropriate due to actual or potential conflicts of interests between such parties (which such judgment shall be made in good faith after consultation with counsel). The Indemnified Party agrees to cooperate fully with (and to provide all relevant documents and records and make all relevant personnel available to) the Indemnifying Party and its counsel, as reasonably requested, in the defense of any such asserted claim at no additional cost to the Indemnifying Party. No Indemnifying Party will consent to the entry of any judgment or enter into any settlement with respect to any such asserted claim without the prior written consent of the Indemnified Party, not to be unreasonably withheld or delayed, (a) if such judgment or settlement does not include as an unconditional term thereof the giving by each claimant or plaintiff to each Indemnified Party of a release from all liability in respect to such claim or (b) if, as a result of such consent or settlement, injunctive or other equitable relief would be imposed against the Indemnified Party or such judgment or settlement could materially and adversely affect the business, operations or assets of the Indemnified Party. No Indemnified Party will consent to the entry of any judgment or enter into any settlement with respect to any such asserted claim without the prior written consent of the Indemnifying Party, not to be unreasonably withheld or delayed. If an Indemnifying Party makes a payment with respect to any claim under the representations or warranties set forth herein and the Indemnified Party subsequently receives from a third party or under the terms of any insurance policy a sum in respect of the same claim, the receiving party will repay to the other party such amount that is equal to the sum subsequently received.

SECTION 10

Miscellaneous

10.1 ***Governing Law***. This Agreement shall be governed in all respects by the laws of the State of Delaware (without reference to the conflicts of law provisions thereof).

10.2 ***Survival***. The representations, warranties, covenants and agreements made herein shall survive any investigation made by the Investor and the Closing.

10.3 ***Successors, Assigns***. Except as otherwise provided herein, the provisions hereof shall inure to the benefit of, and be binding upon, the successors, assigns, heirs, executors and administrators of the parties hereto. This Agreement may not be assigned by either party without the prior written consent of the other; except that either party may assign this Agreement to an Affiliate (as defined in Series E Preferred Stock Purchase Agreement) of such party or to any third party that acquires all or substantially all of such party's business, whether by merger, sale of assets or otherwise.

10.4 ***Notices***. All notices and other communications required or permitted hereunder shall be in writing and shall be sent by facsimile (receipt confirmed) or mailed by registered or certified mail, postage prepaid, return receipt requested, or otherwise delivered by hand or by messenger, addressed

if to the Investor, at the following address:

Novartis Institutes for BioMedical Research, Inc.
250 Massachusetts Avenue
Cambridge, MA 02139
Attention: General Counsel
Facsimile: (617) 871-5786

with a copy (which shall not constitute notice) to:

Kaye Scholer LLP
250 West 55th Street
New York, New York 10019-9710
Attention: Thomas Yadlon
Facsimile: (212) 836-6567

if to the Company, at the following address:

Aduro Biotech, Inc.
626 Bancroft Way #3C
Berkeley, CA 94710
Attention: President
Facsimile: (510) 848-5614

with a copy (which shall not constitute notice) to:

Cooley LLP
3175 Hanover Street
Palo Alto, California 94304
Attention: Michael Tenta
Facsimile: (650) 849-7400

or at such other address as one party shall have furnished to the other party in writing. If notice is provided by facsimile, it shall be deemed to be given one (1) business day after transmission (with receipt of appropriate confirmation). If notice is provided by U.S. mail, notice shall be deemed to be given four (4) days after proper deposit in a U.S. mailbox, postage prepaid, and properly addressed. If notice is provided by a messenger service that guarantees "next business day" delivery, it shall be deemed effective one (1) business day after deposit with such messenger service.

10.5 ***Expenses***. Each of the Company and the Investor shall bear its own expenses and legal fees incurred on its behalf with respect to this Agreement and the transactions contemplated hereby.

10.6 ***Confidentiality.***

(a) Subject to the other provisions of this Section 10.6, the existence of this Agreement and the terms and conditions of this Agreement (collectively, the "***Confidential***

Information") will be maintained in confidence and otherwise safeguarded by the parties to this Agreement. Subject to the other provisions of this Section 10.6, each party shall hold as confidential such Confidential Information in the same manner and with the same protection as such party maintains its own confidential information. Subject to the other provisions of this Section 10.6, a party may only disclose Confidential Information to its employees, representatives, agents, sublicensees, subcontractors, consultants and advisers and its affiliates to the extent reasonably necessary for the purposes of, and for those matters undertaken pursuant to, this Agreement; provided that such persons are bound to maintain the confidentiality of the Confidential Information in a manner consistent with the confidentiality provisions of this Agreement.

(b) The obligations under this Section 10.6 shall not apply to any information to the extent the disclosing party can demonstrate by competent evidence that such information is (at the time of disclosure) or becomes (after the time of disclosure) known to the public or part of the public domain through no breach of this Agreement by such party or its affiliates.

(c) In addition to disclosures allowed under Section 10.6(b), each party may disclose Confidential Information solely to the extent such disclosure is necessary in the following instances: (i) complying with applicable law, court orders or governmental regulations, including rules of self-regulatory organizations and Securities and Exchange Commission filing and disclosure requirements or (ii) to potential or actual investors or acquirers as may be necessary in connection with their evaluation of a potential or actual investment or acquisition; provided that such persons shall be subject to obligations of confidentiality and non-use at least as protective as those set forth in this Section 10.6.

(d) In the event a party is required to disclose Confidential Information by law, applicable court order or governmental regulation or in connection with bona fide legal process, such disclosure shall not be a breach of this Agreement; provided that such party (i) informs the other party as soon as reasonably practicable of the required disclosure; (ii) limits the disclosure to that which is legally required to be disclosed; and (iii) at the other party's request and expense, assists in an attempt to object to or limit the required disclosure.

(e) Either party may disclose the existence and terms of this Agreement in confidence to its attorneys and advisors, and to potential acquirers (and their respective professional attorneys and advisors), in connection with a potential merger, acquisition or reorganization and to existing and potential investors or lenders of such party, as part of their due diligence investigations, or to existing and potential licensees or sublicensees or to permitted assignees, in each case under an agreement to keep the terms of confidentiality and non-use substantially no less rigorous than the terms contained in this Agreement and to use such information solely for the purpose permitted pursuant to this Section 10.6(e).

10.7 ***Finder's Fees***. Each of the Company and the Investor shall indemnify and hold the other harmless from any liability for any commission or compensation in the nature of a finder's fee, placement fee or underwriter's discount (including the costs, expenses and legal fees of defending against such liability) for which the Company or the Investor, or any of its respective partners, employees, or representatives, as the case may be, is responsible.

10.8 ***Counterparts***. This Agreement may be executed in counterparts, each of which shall be enforceable against the party actually executing the counterpart, and all of which together shall constitute one instrument.

10.9 ***Severability***. In the event that any provision of this Agreement becomes or is declared by a court of competent jurisdiction to be illegal, unenforceable or void, this Agreement shall continue in full force and effect without said provision; provided that no such severability shall be effective if it materially changes the economic benefit of this Agreement to any party.

10.10 ***Entire Agreement***. This Agreement, including the exhibits and schedule attached hereto, constitute the full and entire understanding and agreement among the parties with regard to the subjects hereof and thereof. No party shall be liable or bound to any other party in any manner with regard to the subjects hereof or thereof by any warranties, representations or covenants except as specifically set forth herein or therein.

10.11 ***Waiver***. The failure of either party to assert a right hereunder or to insist upon compliance with any term or condition of this Agreement shall not constitute a waiver of that right or excuse a similar subsequent failure to perform any such term or condition by the other party. None of the terms, covenants and conditions of this Agreement can be waived except by the written consent of the party waiving compliance.

10.12 ***Termination***. This Agreement shall terminate automatically if the Collaboration Agreement is terminated pursuant to its terms prior to the consummation of the Closing.

[This space left intentionally blank. Signature page follows.]

IN WITNESS WHEREOF, the parties have executed this Common Stock Purchase Agreement as of the date first set forth above.

COMPANY:

ADURO BIOTECH, INC.

/s/ Stephen T. Isaacs

By: Stephen T. Isaacs
President and Chief Executive Officer

SIGNATURE PAGE TO ADURO BIOTECH, INC.
COMMON STOCK PURCHASE AGREEMENT

IN WITNESS WHEREOF, the parties have executed this Common Stock Purchase Agreement as of the date first set forth above.

INVESTOR:

NOVARTIS INSTITUTES FOR
BIOMEDICAL RESEARCH, INC.

/s/ Scott A. Brown

By: Scott A. Brown
VP, General Counsel

SIGNATURE PAGE TO ADURO BIOTECH, INC.
COMMON STOCK PURCHASE AGREEMENT

Schedule A

The Investor is an institutional “accredited investor” as defined in Rule 501(a) of Regulation D of the Securities Act.

EXHIBIT A

Confidential Information and Inventions Assignment Agreement

Aduro BioTech, Inc.

Proprietary Information And Inventions Agreement

In consideration of my employment or continued employment by Aduro BioTech, Inc. (the "Company"), and the compensation now and hereafter paid to me, I hereby agree as follows:

1. Recognition of Company's Rights: Nondisclosure. At all times during the term of my employment and thereafter, I will hold in strictest confidence and will not disclose, use, lecture upon or publish any of the Company's Proprietary Information (defined below), except as such disclosure, use or publication may be required in connection with my work for the Company, or unless the Board of Directors of the Company expressly authorizes such in writing. I hereby assign to the Company any rights I may have or acquire in such Proprietary Information and recognize that all Proprietary Information shall be the sole property of the Company and its assigns and that the Company and its assigns shall be the sole owner of all patent rights, copyrights, mask work rights, trade secret rights and all other rights throughout the world (collectively, "Proprietary Rights") in connection therewith.

The term "Proprietary Information" shall mean trade secrets, confidential knowledge, data or any other proprietary information of the Company. By way of illustration but not limitation, "Proprietary Information" includes (a) inventions, mask works, trade secrets, ideas, processes, formulas, source and object codes, data, programs, other works of authorship, cell lines, know- how, improvements, discoveries, developments, designs and techniques (hereinafter collectively referred to as "Inventions"); and (b) information regarding plans for research, development, new products, marketing and selling, business plans, budgets and unpublished financial statements, licenses, prices and costs, suppliers and customers; and information regarding the skills and compensation of other employees of the Company.

2. Third Party Information. I understand, in addition, that the Company has received and in the future will receive from third parties confidential or proprietary information ("Third Party Information") subject to a duty on the Company's part to maintain the confidentiality of such information and to use it only for certain limited purposes. During the term of my employment and thereafter, I will hold Third Party Information in the strictest confidence and will not disclose (to anyone other than Company personnel who need to know such information in connection with their work for the Company) or use, except in connection with my work for the Company, Third Party Information unless expressly authorized by an officer of the Company in writing.

3. Assignment of Inventions.

(a) I hereby assign to the Company all my right, title and interest in and to any and all Inventions (and all Proprietary Rights with respect thereto) whether or not patentable or registrable under copyright or similar statutes, made or conceived or reduced to practice or learned by me, either alone or jointly with others, during the period of my employment with the Company.

(b) I acknowledge that all original works of authorship which are made by me (solely or jointly with others) within the scope of my employment and which are protectable by copyright are “works made for hire,” as that term is defined in the United States Copyright Act (17 U.S.C., Section 101). Inventions assigned to or as directed by the Company by this paragraph 3 are hereinafter referred to as “Company Inventions.”

4. Enforcement of Proprietary Rights. I will assist the Company in every proper way to obtain and from time to time enforce United States and foreign Proprietary Rights relating to Company Inventions in any and all countries. To that end I will execute, verify and deliver such documents and perform such other acts (including appearances as a witness) as the Company may reasonably request for use in applying for, obtaining, perfecting, evidencing, sustaining and enforcing such Proprietary Rights and the assignment thereof. In addition, I will execute, verify and deliver assignments of such Proprietary Rights to the Company or its designee. My obligation to assist the Company with respect to Proprietary Rights relating to such Company Inventions in any and all countries shall continue beyond the termination of my employment, but the Company shall compensate me at a reasonable rate after my termination for the time actually spent by me at the Company’s request on such assistance.

In the event the Company is unable for any reason, after reasonable effort, to secure my signature on any document needed in connection with the actions specified in the preceding paragraph, I hereby irrevocably designate and appoint the Company and its duly authorized officers and agents as my agent and attorney in fact, to act for and in my behalf to execute, verify and file any such documents and to do all other lawfully permitted acts to further the purposes of the preceding paragraph thereon with the same legal force and effect as if executed by me. I hereby waive and quitclaim to the Company any and all claims, of any nature whatsoever, which I now or may hereafter have for infringement of any Proprietary Rights assigned hereunder to the Company.

5. Obligation to Keep Company Informed. During the period of my employment, I will promptly disclose to the Company fully and in writing and will hold in trust for the sole right and benefit of the Company any and all Inventions. In addition, after termination of my employment, I will disclose all patent applications filed by me within a year after termination of employment.

6. Prior Inventions. Inventions, if any, patented or unpatented, which I made prior to the commencement of my employment with the Company are excluded from the scope of this Agreement. To preclude any possible uncertainty, I have set forth on Exhibit A attached hereto a complete list of all Inventions that I have, alone or jointly with others, conceived, developed or reduced to practice or caused to be conceived, developed or reduced to practice prior to commencement of my employment with the Company, that I consider to be my property or the property of third parties and that I wish to have excluded from the scope of this Agreement. If disclosure of any such Invention on Exhibit A would cause me to violate any prior confidentiality agreement, I understand that I am not to list such Inventions in Exhibit A but am to inform the Company that all Inventions have been listed for that reason.

7. Additional Activities. I agree that during the period of my employment by the Company I will not, without the Company’s express written consent, engage in any employment or business activity other than for the Company except as noted on my Employment Agreement,

and for the period of my employment by the Company and for two (2) years after the date of termination of my employment by the Company I will not induce any employee of the Company to leave the employ of the Company per the terms of my Employment Agreement.

8. No Improper Use of Materials. During my employment by the Company I will not improperly use or disclose any confidential information or trade secrets, if any, of any former employer or any other person to whom I have an obligation of confidentiality, and I will not bring onto the premises of the Company any unpublished documents or any property belonging to any former employer or any other person to whom I have an obligation of confidentiality unless consented to in writing by that former employer or person.

9. No Conflicting Obligation. I represent that my performance of all the terms of this Agreement and as an employee of the Company does not and will not breach any agreement to keep in confidence information acquired by me in confidence or in trust prior to my employment by the Company. I have not entered into, and I agree I will not enter into, any agreement either written or oral in conflict herewith.

10. Return of Company Documents. When I leave the employ ofthe Company, I will deliver to the Company all drawings, notes, memoranda, specifications, devices, formulas, molecules, cells and documents, together with all copies thereof, and any other material containing or disclosing any Company Inventions, Third Party Information or Proprietary Information of the Company. I further agree that any property situated on the Company's premises and owned by the Company, including disks and other storage media, filing cabinets or other work areas, is subject to inspection by Company personnel at any time with or without notice. Prior to leaving, I will cooperate with the Company in completing and signing the Company's termination statement for technical and management personnel.

11. Equal and Equitable Remedies. Because my services ate personal and unique and because I may have access to and become acquainted with the Proprietary Information ofthe Company, the Company shall have the right to enforce this Agreement and any of its provisions by injunction, specific performance or other equitable relief, without bond, without prejudice to any other rights and remedies that the Company may have for a breach of this Agreement.

12. Notices. Any notices required or permitted hereunder shall be given to the appropriate party at the address specified below or at such other address as the party shall specify in writing. Such notice shall be deemed given upon personal delivery to the appropriate address or if sent by certified or registered mail, three days after the date of mailing.

13. General Provisions.

(a) Governing Law. This Agreement will be governed by and construed according to the laws of the State of California.

(b) Entire Agreement. This Agreement sets forth the entire agreement and understanding between the Company and me relating to the subject matter hereof and supersedes and merges all prior discussions between us. No modification of or amendment to this Agreement, nor any waiver of any rights under this Agreement, will be effective unless in writing signed by the party to be charged. Any subsequent change or changes in my duties,

salary or compensation will not affect the validity or scope of this Agreement. As used in this Agreement, the period of my employment includes any time during which I may be retained by the Company as a consultant.

(c) Severability. If one or more of the provisions in this Agreement are deemed unenforceable by law, then the remaining provisions will continue in full force and effect.

(d) Successors and Assigns. This Agreement will be binding upon my heirs, executors, administrators and other legal representatives and will be for the benefit of the Company, its successors and its assigns.

(e) Survival. The provisions of this Agreement shall survive the termination of my employment and the assignment of this Agreement by the Company to any successor in interest or other assignee.

(f) Employment. I agree and understand that nothing in this Agreement shall confer any right with respect to continuation of employment by the Company, nor shall it interfere in any way with my right or the Company's right to terminate my employment at any time, with or without cause.

(g) Waiver. No waiver by the Company of any breach of this Agreement shall be a waiver of any preceding or succeeding breach. No waiver by the Company of any right under this Agreement shall be construed as a waiver of any other right. The Company shall not be required to give notice to enforce strict adherence to all terms of this Agreement.

(h) Effectiveness. This Agreement shall be effective as of the first day of my employment with the Company.

I UNDERSTAND THAT THIS AGREEMENT AFFECTS MY RIGHTS TO INVENTIONS MAKE DURING MY EMPLOYMENT, AND RESTRICTS MY RIGHT TO DISCLOSE OR USE THE COMPANY'S PROPRIETARY INFORMATION DURING OR SUBSEQUENT TO MY EMPLOYMENT.

[Continued on next page]

I HAVE READ THIS AGREEMENT CAREFULLY AND UNDERSTAND ITS TERMS. I HAVE COMPLETELY FILLED OUT EXHIBIT A TO THIS AGREEMENT.

Dated as of , 2012
(Date of First Employment)

Signature of Employee

Printed Name of Employee

Address of Employee

ACCEPTED AND AGREED TO:

Aduro BioTech, Inc.

By:

Stephen Isaacs, Chairman & CEO

EXHIBIT B

Form of Preferred Stock Purchase Agreement

EXHIBIT B

ADURO BIOTECH, INC.

SERIES E PREFERRED STOCK PURCHASE AGREEMENT (SECOND TRANCHE)

THIS SERIES E PREFERRED STOCK PURCHASE AGREEMENT (SECOND TRANCHE) (the "***Agreement***") is made as of March 12, 2015 (the "***Execution Date***") by and between Aduro Biotech, Inc., a Delaware corporation (the "***Company***"), and Novartis Institutes for BioMedical Research, Inc., a Delaware corporation (the "***Investor***").

RECITALS

WHEREAS, the Company and the Investor are party to that certain Series E Purchase Agreement, made as of March 12, 2015 (the "***First Tranche Purchase Agreement***"), pursuant to which the Company has agreed to issue to the Investor, and the Investor has agreed to purchase from the Company, 2,361,029 shares of Series E Preferred Stock, par value $0.0001 per share (the "***Series E Preferred***"), on the terms and conditions set forth therein; and

WHEREAS, pursuant to terms set forth in this Agreement the Company desires to sell to the Investor, and the Investor desires to purchase from the Company, additional shares of Series E Preferred.

NOW, THEREFORE, in consideration of the premises and mutual covenants herein contained, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto agree as follows:

SECTION 1

Purchase and Sale of Shares

1.1 ***Authorization.*** The Company has, or before Closing (as defined in Section 1.3) will have, duly authorized the sale and issuance, pursuant to the terms of this Agreement, of 2,361,029 shares of Series E Preferred, having the rights, privileges, preferences and restrictions set forth in the Company's Certificate of Incorporation.

1.2 ***Sale of Shares***. Subject to the terms and conditions of this Agreement, the Company will sell and issue to the Investor, and the Investor will purchase, an aggregate of 2,361,029 shares of Series E Preferred for the cash purchase price of $10.5886 per share (the "***Purchase Price***"). The shares of Series E Preferred sold under this Agreement are collectively referred to as the "***Shares***."

1.3 ***Closing***. The purchase and sale of the Shares shall take place at a closing (the "***Closing***") to be held at the offices of Cooley LLP, 3175 Hanover Street, Palo Alto, California 94304-1130, on a date following the satisfaction or waiver of each of the conditions set forth in Sections 4 and 5 hereof (other than those conditions that are to be satisfied at the Closing, but subject to satisfaction or waiver of such conditions) to be mutually agreed by the parties and be no later than

December 31, 2015, unless such conditions (other than those conditions that are to be satisfied at the Closing) are not satisfied on or prior to December 30, 2015, in which case the Closing will take place on second business day following the satisfaction or waiver of such conditions (other than those conditions that are to be satisfied at the Closing, but subject to satisfaction or waiver of such conditions) (the "***Closing Date***"). At the Closing, the Company will deliver or cause to be delivered to the Investor a certificate or certificates representing the Shares that the Investor is purchasing and, concurrently, the Investor shall purchase the Shares at a price per share equal to the Purchase Price by wire transfer in accordance with the Company's instructions, which shall be provided in writing no later than two business days prior to the Closing Date.

SECTION 2

Representations and Warranties of the Company

Except as set forth on the Schedule of Exceptions delivered by the Company to the Investor on the date hereof, the Company hereby represents and warrants the following as of the date hereof and as of the Closing Date (except for the representations and warranties that speak as of a specific date, which shall be made as of such date). For purposes of these representations and warranties (other than those set forth in Sections 2.2, 2.4 and 2.6) the term "Company" includes any subsidiaries of the Company.

2.1 ***Organization and Good Standing and Qualifications***. The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware and has full corporate power and authority to conduct its business as presently conducted and as proposed to be conducted by it. The Company is duly qualified to do business as a foreign corporation in California and is in good standing under the laws of such State. The Company is not required to be qualified to do business as a foreign corporation in any other jurisdiction in which the failure so to qualify would have a material adverse effect on the business, prospects, assets or condition (financial or otherwise) of the Company (a "***Company Material Adverse Effect***"). The Company has furnished to the Investor complete and accurate copies of its Certificate of Incorporation and By-laws, each as amended to date and presently in effect. The Company has at all times complied with all provisions of its Certificate of Incorporation and By-laws and is not in default under, or in violation of, any such provision. The Company is not, and has never been, a "shell company," as described in paragraphs (i)(1)(i) and (ii) of Rule 144 promulgated under the Securities Act of 1933, as amended (the "***Securities Act***").

2.2 ***Subsidiaries, Etc***. Except as set forth in Section 2.2 of the Schedule of Exceptions, the Company has no subsidiaries and does not own or control, directly or indirectly, any shares of capital stock of any other corporation or any interest in any partnership, limited liability company, joint venture or other non-corporate business enterprise.

2.3 ***Authorization***. The execution, delivery and performance by the Company of this Agreement, and the consummation by the Company of the transactions contemplated hereby, have been duly authorized by all necessary corporate action. This Agreement has been duly executed and

delivered by the Company and constitutes a valid and binding obligation of the Company enforceable against the Company in accordance with its respective terms. The execution and delivery of this Agreement, the consummation of the transactions contemplated hereby and the compliance with the provisions of this Agreement by the Company will not (a) conflict with or violate any provision of the Certificate of Incorporation or By-laws of the Company, (b) conflict with, result in a breach of, constitute (with or without due notice or lapse of time or both) a default under, result in the acceleration of obligations under, create in any party the right to accelerate, terminate, modify or cancel, or require any notice, consent or waiver under, any contract, lease, sublease, license, sublicense, franchise, permit, indenture, agreement or mortgage for borrowed money, instrument of indebtedness, Security Interest (as defined below) or other arrangement to which the Company is a party or by which the Company is bound or to which its assets are subject, (c) result in the imposition of any Security Interest upon any assets of the Company or (d) violate any order, writ, injunction, decree, statute, rule or regulation applicable to the Company or any of its properties or assets. For purposes of this Agreement, "***Security Interest***" means any mortgage, pledge, security interest, encumbrance, charge or other lien (whether arising by contract or by operation of law).

2.4 ***Valid Issuance of Shares***. The issuance, sale and delivery of the Shares in accordance with this Agreement, and the issuance and delivery of the shares of Common Stock issuable upon conversion of the Shares, have been, or will be on or prior to the Closing, duly authorized by all necessary corporate action on the part of the Company, and all such shares have been duly reserved for issuance. The Shares when so issued, sold and delivered against payment therefor in accordance with the provisions of this Agreement, and the shares of Common Stock issuable upon conversion of the Shares, when issued upon such conversion, will be duly and validly issued, fully paid and nonassessable, and free of restrictions on transfer other than restrictions imposed or created under this Agreement, by applicable law, or by the Investor.

2.5 [Intentionally omitted.]

2.6 ***Capitalization***.

(a) The authorized capital stock of the Company as of the date of this Agreement consists of (i) 85,000,000 shares of Common Stock, $0.0001 par value per share, of which 589,214 shares are issued and outstanding and none are held in the treasury of the Company, and (ii) 69,716,345 shares of Preferred Stock, $0.0001 par value per share, of which (A) 161,843 shares have been designated as Series A Preferred, all of which are issued and outstanding, (B) 3,393,666 shares have been designated as Series A-1 Preferred, 3,369,431 of which are issued and outstanding, (C) 21,525,480 shares have been designated as Series B Preferred, 21,441,709 of which are issued and outstanding, (D) 25,623,183 shares have been designated as Series C Preferred, all of which are issued and outstanding and (E) 19,012,173 shares have been designated as Series D Preferred, all of which are issued and outstanding. Since the Execution Date, the Company has not issued any shares of Series E Preferred other than the 2,361,029 shares of Series E Preferred that are subject to issuance pursuant to the First Tranche Purchase Agreement.

(c) Section 2.6(b) of the Schedule of Exceptions includes a complete and accurate list, as of the date of this Agreement, of the holders of capital stock of the Company, showing the number of shares of capital stock, and the class or series of such shares, held by each stockholder and (for shares other than Common Stock) the number of shares of Common Stock (if any) into which such shares are convertible, immediately prior to the Closing. Section 2.6(b) of the Schedule of Exceptions also indicates all outstanding shares of Common Stock that constitute restricted stock or that are otherwise subject to a repurchase or redemption right, indicating the name of the applicable stockholder, the vesting schedule (including any acceleration provisions with respect thereto), and the repurchase price payable by the Company. All of the issued and outstanding shares of capital stock of the Company have been duly authorized and validly issued and are fully paid and nonassessable. All of the issued and outstanding shares of capital stock of the Company have been offered, issued and sold by the Company in compliance with all applicable federal and state securities laws.

(c) Section 2.6(c) of the Schedule of Exceptions includes a complete and accurate list, as of the date of this Agreement of: (i) all stock option plans and other stock or equity- related plans of the Company (the "***Company Stock Plans***"), indicating for each Company Stock Plan the number of shares of Common Stock issued to date under such Plan, the number of shares subject to outstanding options under such Plan and the number of shares reserved for future issuance under such Plan; (ii) all holders of outstanding options to purchase shares of Common Stock ("***Company Stock Options***"), indicating with respect to each Company Stock Option the Company Stock Plan under which it was granted, the number of shares of Common Stock subject to such Company Stock Option, the exercise price, the date of grant and the vesting schedule (including any acceleration provisions with respect thereto); and (iii) all holders of warrants or other rights (other than Company Stock Options and convertible preferred stock) to purchase or acquire shares of capital stock of the Company (collectively, the "***Company Warrants***"), indicating with respect to each Company Warrant the agreement or other document under which it was granted, the number of shares of capital stock, and the class or series of such shares, subject to such Company Warrant, the exercise price, the date of issuance and the expiration date thereof. The Company has furnished to the Investor complete and accurate copies of all Company Stock Plans, forms of all stock option agreements evidencing Company Stock Options and all Company Warrants. All of the shares of capital stock of the Company subject to Company Stock Options and Company Warrants will be, upon issuance pursuant to the exercise of such instruments, duly authorized, validly issued, fully paid and nonassessable.

(d) Except as set forth in Section 2.6(c) and Section 2.6(d) of the Schedule of Exceptions, (i) no subscription, warrant, option, convertible security or other right (contingent or otherwise) to purchase or acquire any shares of capital stock of the Company is authorized or outstanding, (ii) the Company has no obligation (contingent or otherwise) to issue any subscription, warrant, option, convertible security or other such right, or to issue or distribute to holders of any shares of its capital stock any evidences of indebtedness or assets of the Company, (iii) the Company has no obligation (contingent or otherwise) to purchase, redeem or otherwise acquire any shares of its capital stock or any interest therein or to pay any dividend or to make any other distribution in respect thereof, and (iv) there are no outstanding or authorized stock appreciation, phantom stock or similar rights with respect to the Company.

(e) Except as set forth in Section 2.6(e) of the Schedule of Exceptions, there is no agreement, written or oral, between the Company and any holders of its securities, or, to the best of the Company's knowledge, among any holder of its securities, relating to the sale or transfer (including without limitation agreements relating to rights of first refusal, co sale rights or "drag along" rights), registration under the Securities Act, or voting, of the capital stock of the Company.

2.7 ***Financial Statements***. The Company has furnished to the Investor a complete and accurate copy of (a) the audited balance sheet of the Company at December 31, 2014 (the "***Balance Sheet Date***") and the related audited statement of operations for the fiscal year then ended (collectively, the "***Financial Statements***"). The Financial Statements are in accordance with the books and records of the Company and present fairly the financial condition and results of operations of the Company, at the dates and for the periods indicated.

2.8 ***Material Adverse Change***. Except as set forth in Section 2.8 of the Schedule of Exceptions, since the Balance Sheet Date, there has not been:

(a) any change in the assets, liabilities, financial condition or operating results of the Company from that reflected in the Financial Statements, except changes in the ordinary course of business that have not caused, in the aggregate, a Company Material Adverse Effect;

(b) any damage, destruction or loss, whether or not covered by insurance, that would have a Company Material Adverse Effect;

(c) any waiver or compromise by the Company of a valuable right or of a material debt owed to it;

(d) any satisfaction or discharge of any lien, claim, or encumbrance or payment of any obligation by the Company, except in the ordinary course of business and the satisfaction or discharge of which would not have a Company Material Adverse Effect;

(e) any material change to a material contract or agreement by which the Company or any of its assets is bound or subject;

(f) any material change in any compensation arrangement or agreement with any employee, officer, director or stockholder;

(g) any resignation or termination of employment of any officer or Key Employee of the Company;

(h) any mortgage, pledge, transfer of a security interest in, or lien, created by the Company, with respect to any of its material properties or assets, except liens for taxes not yet due or payable and liens that arise in the ordinary course of business and do not materially impair the Company's ownership or use of such property or assets;

(i) any loans or guarantees made by the Company to or for the benefit of its employees, officers or directors, or any members of their immediate families, other than travel advances and other advances made in the ordinary course of its business;

(j) any declaration, setting aside or payment or other distribution in respect of any of the Company's capital stock, or any direct or indirect redemption, purchase, or other acquisition of any of such stock by the Company;

(k) any sale, assignment or transfer of any Company Intellectual Property that could reasonably be expected to result in a Company Material Adverse Effect;

(l) receipt of notice that there has been a loss of, or material order cancellation by, any major customer of the Company;

(m) to the Company's knowledge, any other event or condition of any character, other than events affecting the economy or the Company's industry generally, that could reasonably be expected to result in a Company Material Adverse Effect; or

(n) any arrangement or commitment by the Company to do any of the things described in this Section 2.8.

2.9 ***No Undisclosed Liabilities***. Except as set forth in Section 2.9 of the Schedule of Exceptions, the Company does not have any liability (whether known or unknown and whether absolute or contingent), except for (a) liabilities shown expressly, or included in amounts shown, on the Balance Sheet, (b) liabilities less than $250,000 on an individual basis, which have arisen since the Balance Sheet Date in the ordinary course of business and which are similar in nature and amount to the liabilities which arose during the comparable period of time in the immediately preceding fiscal period and (c) contractual liabilities incurred in the ordinary course of business which are not required by GAAP to be reflected on a balance sheet and which would not, either individually or in the aggregate, have or result in a Company Material Adverse Effect.

2.10 ***Governmental Consents***. No consent, approval, order or authorization of, or registration, qualification, designation, declaration or filing with, any court, arbitrational tribunal, administrative agency or commission or other governmental or regulatory authority or agency (each of the foregoing is hereafter referred to as a "***Governmental Entity***") is required on the part of the Company in connection with the offer, issuance, sale and delivery of the Shares, or the issuance and delivery of the shares of Common Stock issuable upon conversion of the Shares, as contemplated by this Agreement, except such filings as shall have been made prior to and shall be effective on and as of the Closing and such filings required to be made after the Closing under applicable federal and state securities laws, all of which filings are specified in the Schedule of Exceptions. Based on the representations made by the Investor in Section 3 of this Agreement, the offer and sale of the Shares to the Investor will be in compliance with applicable federal and state securities laws.

2.11 ***Actions Pending***. There is no action, suit or proceeding, or governmental inquiry or investigation, pending, or, to the best of the Company's knowledge, any basis therefor or threat thereof, against the Company or any officer, director or Key Employee of the Company, which questions the validity of this Agreement or the right of the Company to enter into such agreement or to consummate the transactions contemplated hereby. There is no litigation pending, or, to the best of the Company's knowledge, any basis therefor or threat thereof, against the Company or any of its employees by reason of the past employment relationships of any of the employees, the proposed activities of the Company, or negotiations by the Company with possible investors in the Company. The Company is not subject to any outstanding judgment, order or decree.

2.12 ***Foreign Corrupt Practices Act, OFAC and Anti-Money Laundering***.

(a) None of the Company, its subsidiaries or, to the knowledge of the Company, any of the Company's directors, officers, employees or agents has taken any action, directly or indirectly, that would result in a violation by such persons of the Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (the "***FCPA***"), including, without limitation, making use of the mails or any means or instrumentality of interstate commerce corruptly in furtherance of an offer, payment, promise to pay or authorization of the payment of any money, or other property, gift, promise to give, or authorization of the giving of anything of value to any "foreign official" (as such term is defined in the FCPA) or any foreign political party or official thereof or any candidate for foreign political office, in contravention of the FCPA and the Company and its subsidiary have conducted their businesses in compliance with the FCPA and have instituted and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

(b) Neither the Company nor any of its subsidiaries nor, to the knowledge of the Company, any director, officer, agent, employee, or person acting on behalf of the Company or any subsidiary is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("***OFAC***"), and the Company will not directly or indirectly use the proceeds of the sale of the Shares, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity, towards any sales or operations in Cuba, Iran, Syria, Sudan, Myanmar or any other country sanctioned by OFAC or for the purpose of financing the activities of any person currently subject to any U.S. sanctions administered by OFAC.

(c) The operation of each of the Company and its subsidiaries are and have been conducted at all times in compliance with the money laundering statues of applicable jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any applicable governmental agency (collectively, the "***Money Laundering Laws***"), and no action suit or proceeding by or before any court of governmental agency, authority or body or any arbitrator involving the Company and/or any subsidiary with respect to the Money Laundering Laws is pending, or to the Company's knowledge, threatened.

2.13 ***Data Privacy***. In connection with its collection, storage, transfer (including, without limitation, any transfer across national borders) and/or use of any personally identifiable information from any individuals, including, without limitation, any customers, prospective customers, employees and/or other third parties (collectively "***Personal Information***"), the Company is and has been in compliance with all applicable laws in all relevant jurisdictions, the Company's privacy policies and the requirements of any contract or codes of conduct to which the Company is a party. The Company has commercially reasonable physical, technical, organizational and administrative security measures and policies in place to protect all Personal Information collected by it or on its behalf from and against unauthorized access, use and/or disclosure. The Company is and has been in compliance in all material respects with all laws relating to data loss, theft and breach of security notification obligations

2.14 ***Compliance with Law***. The Company has, in all material respects, complied with all laws, regulations and orders applicable to its present and proposed business and has all material permits and licenses required thereby. There is no term or provision of any mortgage, indenture, contract, agreement or instrument to which the Company is a party or by which it is bound, or, to the best of the Company's knowledge, of any provision of any state or federal judgment, decree, order, statute, rule or regulation applicable to or binding upon the Company, which materially adversely affects or, so far as the Company may now foresee, in the future is reasonably likely to materially adversely affect the Company. To the best of the Company's knowledge, no employee of the Company is in violation of any term of any contract or covenant (either with the Company or with another entity) relating to employment, patents, assignment of inventions, proprietary information disclosure, non-competition or non-solicitation.

2.15 ***Exemption from Registration, Valid Issuance***. Subject to, and in reliance on, the representations, warranties and covenants made herein by the Investor, the issuance and sale of the Shares in accordance with the terms and on the bases of the representations and warranties set forth in this Agreement, may and shall be properly issued pursuant to Section 4(a)(2) of the Securities Act, Regulation D promulgated pursuant to the Act ("***Regulation D***") and/or any other applicable federal and state securities laws. The sale and issuance of the Shares pursuant to, and the Company's performance of its obligations under, this Agreement will not (i) result in the creation or imposition of any liens, charges, claims or other encumbrances upon the Shares or any of the assets of the Company, or (ii) except as set forth in Section 2.15 of the Schedule of Exceptions, entitle the holders of any outstanding shares of capital stock of the Company to preemptive or other rights to subscribe to or acquire the Shares or other securities of the Company.

2.16 ***Taxes***.

(a) For purposes of this Agreement: (i) "**Tax**" or "**Taxes**" means all taxes, charges, fees, levies or other similar assessments or liabilities, including without limitation income, gross receipts, ad valorem, premium, value-added, excise, real property, personal property, sales,

use, transfer, withholding, employment, unemployment insurance, social security, business license, business organization, environmental, workers compensation, payroll, profits, license, lease, service, service use, severance, stamp, occupation, windfall profits, customs, duties, franchise and other taxes imposed by the United States of America or any state, local or foreign government, or any other Governmental Entity, and any interest, fines, penalties, assessments or additions to tax resulting from, attributable to or incurred in connection with any tax or any contest or dispute thereof, and any liability for the payment of the foregoing as a result of being a member of an affiliated, combined, consolidated or unitary group for any period, as a result of any tax sharing or tax allocation agreement, arrangement or understanding, or as a result of being liable for another person's taxes as a transferee or successor, by contractual obligation or otherwise; and (ii) "**Tax Returns**" means all reports, returns, declarations, statements or other information, including any schedule or attachment thereto, required to be supplied to a taxing authority in connection with Taxes and any amendment thereof.

(b) The amount shown on the Balance Sheet as provision for Taxes is sufficient in all material respects for the payment of all unpaid Taxes, whether or not disputed, for all periods ending on or before the date thereof. The Company has timely filed or obtained presently effective extensions with respect to all Tax Returns that are or were required to be filed by it, and such Tax Returns are complete and accurate in all material respects. All Taxes have been timely paid, whether or not shown on such Tax Returns. All Taxes that the Company is or was required by law to have withheld or collected have been duly withheld or collected and, to the extent required, have been timely paid to the proper Governmental Entity, and the Company has complied with all related recordkeeping requirements. The Tax Returns of the Company have not been audited by any Governmental Entity, the Company has not agreed to any waivers of statutes of limitations with respect to Taxes, and no controversy with respect to Taxes is pending or, to the best of the Company's knowledge, threatened. No claim has ever been made by any Governmental Entity in a jurisdiction where the Company does not file Tax Returns that the Company is or may be subject to taxation by that jurisdiction, and, to the Company's knowledge, there is no basis for any such claim to be made. Neither the Company nor any of its stockholders has ever filed an election pursuant to Section 1362 of the Internal Revenue Code of 1986, as amended (the "***Code***"), that the Company be taxed as an S corporation. The Company's net operating losses, as set forth in the Financial Statements, are not subject to any limitations imposed by Section 382 of the Code or comparable provisions of state, local, or foreign law, and consummation of the transactions contemplated by this Agreement or by any other agreement, understanding or commitment, contingent or otherwise, to which the Company is a party or by which it is otherwise bound will not have the effect of limiting the Company's ability to use such net operating losses in full to offset taxable income. The Company does not have any liabilities for Taxes of any other person or entity by contract, as a transferee or successor, under U.S. Treasury Regulation section 1.1502-6 or analogous state, county, local or foreign provision or otherwise.

(c) The Company is not now and has never been a "United States real property holding corporation" as defined in Section 897(c)(2) of the Code and the Treasury Regulations thereunder.

2.17 ***Investment Company***. The Company is not an investment company within the meaning of the Investment Company Act of 1940, as amended.

2.18 ***Shell Company***. The Company is not, and has never been, an issuer identified in Rule 144(i)(1) promulgated under the Securities Act

2.19 ***Brokers***. Except as set forth in Section 2.19 of the Schedule of Exceptions, no brokers, finders or financial advisory fees or commissions will be payable by the Company or any of its subsidiaries in respect of the transactions contemplated by this Agreement.

2.20 ***Property and Assets***. The Company has good title to, or a valid leasehold interest in, all of its material properties and assets, including all properties and assets reflected in the Balance Sheet, except those disposed of since the date thereof in the ordinary course of business, and none of such properties or assets is subject to any Security Interest other than those the material terms of which are described in the Balance Sheet or in the Schedule of Exceptions.

2.21 ***Intellectual Property***.

(a) The Schedule of Exceptions includes a complete and accurate list of (i) each patent, patent application, copyright registration or application therefor, and trademark, service mark and domain name registration or application therefor of the Company and (ii) each Product Candidate (as defined below) owned or in-licensed by the Company.

(b) To the best of the Company's Knowledge, the Company is the owner, licensee or has the right to use all Company Intellectual Property (as defined below) necessary (i) to research, develop, use, manufacture, market and sell the Product Candidates and (ii) to operate the Internal Systems (as defined below). The Company has taken all reasonable measures to protect the proprietary nature of each item of Company Intellectual Property (as defined below), and to maintain in confidence all trade secrets and confidential information, that it owns or uses. To the best of the Company's Knowledge, (i) the patents and patent applications that constitute Company Intellectual Property have been prepared, filed and prosecuted in accordance with all applicable laws and regulations and (ii) any issued patents that constitute Company Intellectual Property are valid or enforceable. To the best of the Company's Knowledge, no other person or entity has any rights to any of the Company Intellectual Property owned by the Company (except pursuant to agreements or licenses specified in the Schedule of Exceptions), and no other person or entity is infringing, violating or misappropriating any of the Company Intellectual Property. To the best of the Company's Knowledge, there are no pending or threatened legal or governmental proceedings relating to any Company Intellectual Property, other than ex parte examination proceedings before the US Patent and Trademark Office or ex parte examination proceedings or oppositions before corresponding foreign patent offices.

(c) To the best of the Company's Knowledge, as of the date of this Agreement, none of the Product Candidates, or the research, development, manufacture, marketing, sale, offer to sell, importation, provision or use thereof, infringes or would infringe, or violates or

would violate, or constitutes or would constitute a misappropriation of, any Intellectual Property rights of any person or entity. To the best of the Company's Knowledge, none of the Internal Systems, or the use thereof, infringes or violates, or constitutes a misappropriation of, any Intellectual Property rights of any person or entity. The Schedule of Exceptions lists any complaint, claim or notice, or written threat thereof, received by the Company alleging any such infringement, violation or misappropriation; and the Company has provided to the Investor complete and accurate copies of all written documentation in the possession of the Company relating to any such complaint, claim, notice or threat. The Company has furnished to the Investor complete and accurate copies of all written documentation in the Company's possession relating to claims or disputes (including without limitation as to validity, inventorship, ownership or enforceability) known to the Company concerning any Company Intellectual Property.

(d) The Schedule of Exceptions identifies each license or other agreement, including material transfer agreements, pursuant to which the Company has licensed, distributed or otherwise granted any rights to any third party or which the licensor or inventor has granted any rights with respect to, any Company Intellectual Property. Except as described in the Schedule of Exceptions, the Company has not agreed to indemnify any person or entity against any infringement, violation or misappropriation of any Intellectual Property rights with respect to any Company Intellectual Property.

(e) The Schedule of Exceptions identifies each item of Company Intellectual Property that is owned by a party other than the Company, and the license or agreement pursuant to which the Company uses it (excluding off-the-shelf software programs licensed by the Company pursuant to "shrink wrap" or "click through" licenses).

(f) All of the copyrightable materials incorporated in, underlying or used with the Company Intellectual Property have been created by employees of the Company within the scope of their employment by the Company or by independent contractors of the Company who have executed agreements expressly assigning all right, title and interest in such copyrightable materials to the Company. No portion of such copyrightable materials was jointly developed with any third party.

(g) For purposes of this Agreement (except for the knowledge definition below, which shall be applicable solely to this Section 2.21), the following terms shall have the following meanings:

(i) "***Company Intellectual Property***" shall mean the Intellectual Property owned by or licensed to the Company and incorporated in, underlying or used in connection with the Product Candidates or the Internal Systems, including, without limitation, the patent and trademark rights identified in the Schedule of Exceptions.

(ii) "***Intellectual Property***" shall mean all: (A) patents, patent applications, patent disclosures and all related continuation, continuation-in-part, divisional, reissue, reexamination, utility model, certificate of invention and design patents, patent applications,

registrations and applications for registrations; (B) trademarks, service marks, trade dress, Internet domain names, logos, trade names and corporate names and registrations and applications for registration thereof; (C) copyrights and registrations and applications for registration thereof; (D) computer software, data and documentation; (E) inventions, trade secrets and confidential business information, whether patentable or nonpatentable and whether or not reduced to practice, know-how, manufacturing and product processes and techniques, formulae, research and development information, copyrightable works, financial, marketing and business data, pricing and cost information, business and marketing plans and customer and supplier lists and information; (F) other proprietary rights relating to any of the foregoing (including remedies against infringements thereof and rights of protection of interest therein under the laws of all jurisdictions); and (G) copies and tangible embodiments thereof.

(iii) "***Internal Systems***" shall mean the internal systems of the Company that are used in its business or operations, including, computer hardware systems, software applications and embedded systems.

(iv) "***Key Employees***" shall mean the following officers: Dirk G. Brockstedt, Thomas Dubensky, Jr., Stephen T. Isaacs, Jennifer Lew and Gregory Schafer.

(v) "***Knowledge***," including the phrase "***to the Company's Knowledge***," shall mean the actual knowledge after reasonable investigation of the Key Employees.

(vi) "***Product Candidates***" shall mean (A) the therapeutic vaccines and other products that the Company (1) currently develops, manufactures, markets, sells or licenses or (2) currently plans to develop, manufacture, market, sell or license in the future and (B) the services that the Company (1) currently provides or (2) currently plans to provide in the future.

2.22 ***Insurance***. The Company maintains valid policies of workers' compensation insurance and of insurance with respect to its properties and business of the kinds and in the amounts not less than is customarily obtained by corporations of established reputation engaged in the same or similar business and similarly situated, including, without limitation, insurance against loss, damage, fire, theft, public liability and other risks.

2.23 ***Material Contracts and Obligations***. The Schedule of Exceptions sets forth a list of all material agreements or commitments of any nature (whether written or oral) to which the Company is a party or by which it is bound, including without limitation (a) any agreement which requires future expenditures by the Company in excess of $500,000 or which might result in payments to the Company in excess of $500,000, (b) any employment agreement, employee benefit, bonus, pension, profit-sharing, stock option, stock purchase or similar plan or arrangement, (c) any distributor, sales representative or similar agreement, (d) any agreement with any current or former stockholder, officer or director of the Company, or any "affiliate" or "associate" of such persons (as such terms are defined in the rules and regulations promulgated under the Securities Act), including without limitation any agreement or other arrangement providing for the furnishing of services by, rental of real or personal property from, or otherwise requiring payments to, any such person or

entity, (e) any agreement under which the Company is restricted from carrying on any business anywhere in the world, (f) any agreement relating to indebtedness for borrowed money, (g) any agreement for the disposition of a material portion of the Company's assets (other than for the sale of inventory in the ordinary course of business), (h) any agreement for the acquisition of the business or securities or other ownership interests of another party, (i) any agreement for the license of any patent, copyright, trademark, trade secret or other proprietary right to or from the Company (other than licenses by the Company of "off the shelf" or other commercially available standard products) or (j) any other agreement that is material to the operations, business or finances of the Company. The Company has furnished to the Investor copies of the foregoing agreements (or an accurate summary of any oral agreement). All of such agreements and contracts are valid, binding against the Company and in full force and effect. Neither the Company, nor, to the best of the Company's knowledge, any other party thereto, is in default of any of its obligations under any of the agreements or contracts listed in the Schedule of Exceptions.

2.24 ***Employees***.

(a) All current and former employees of the Company have executed and delivered Confidential Information and Inventions Assignments and Non-Solicitation Agreements in the form of Exhibit A and all of such agreements are in full force and effect. All current and former consultants of the Company that have performed development work or provided technical services to the Company or have otherwise had access to confidential or proprietary information of the Company have executed and delivered non-disclosure and assignment of inventions agreements copies of which have been made available to the Investor, and all of such agreements are in full force and effect.

(b) The Company is not aware that any employee of the Company has plans to terminate his or her employment relationship with the Company. Except as set forth in Section 2.24(b) of the Schedule of Exceptions, all employees of the Company are engaged by the Company on a full time basis. The Company has complied in all material respects with all applicable laws relating to wages, hours, equal opportunity, collective bargaining, workers' compensation insurance and the payment of social security and other Taxes. None of the employees of the Company is represented by any labor union, and there is no labor strike or other labor trouble pending with respect to the Company (including, without limitation, any organizational drive) or, to the best of the Company's knowledge, threatened. The Schedule of Exceptions sets forth a list of all agreements between any officer of the Company and a previous employer of such person that contains non-competition or non-solicitation covenants. The Company has furnished to the Investor copies of such agreements. To the Company's knowledge, no employee of the Company is obligated under any contract or subject to any judgment, decree or administrative order that would conflict or interfere with (i) the performance of the employee's duties as an employee, director or officer of the Company, or (ii) the Company's business as conducted or proposed to be conducted.

(c) The Schedule of Exceptions sets forth (i) the annual salary, (ii) any bonus arrangements and (iii) rights, options or warrants to subscribe for, purchase or otherwise acquire Common Stock of each of the Key Employees.

2.25 ***ERISA***. Except as set forth in Section 2.25 of the Schedule of Exceptions, the Company does not have or otherwise contribute to or participate in any employee benefit plan subject to the Employee Retirement Income Security Act of 1974, as amended, other than a medical benefit plan with respect to which the Company has made all required contributions and has complied with all applicable laws.

2.26 ***Books and Records***. The minute books of the Company contain complete and accurate records of all meetings and other corporate actions of its stockholders and its Board of Directors and committees thereof. The stock ledger of the Company is complete and accurate and reflects all issuances, transfers, repurchases and cancellations of shares of capital stock of the Company.

2.27 ***Permits***. The Schedule of Exceptions sets forth a list of all material permits, licenses, registrations, certificates, orders or approvals from any Governmental Entity ("***Permits***") issued to or held by the Company. Such listed Permits are the only Permits that are required for the Company to conduct its business as presently or proposed to be conducted, except for those the absence of which would not have a Company Material Adverse Effect. Each such Permit is in full force and effect and, to the best of the Company's Knowledge, no suspension or cancellation of such Permit is threatened and there is no basis for believing that such Permit will not be renewable upon expiration

2.28 ***Environmental Matters***.

(a) The Company has complied with all applicable Environmental Laws (as defined below). There is no pending or, to the best of the Company's knowledge, threatened civil or criminal litigation, written notice of violation, formal administrative proceeding, or investigation, inquiry or information request by any Governmental Entity, relating to any Environmental Law involving the Company. For purposes of this Agreement, "***Environmental Law***" shall mean any federal, state or local law, statute, rule or regulation or the common law relating to the environment or occupational health and safety, including any statute, regulation, administrative decision or order pertaining to (i) treatment, storage, disposal, generation and transportation of industrial, toxic or hazardous materials or substances or solid or hazardous waste; (ii) air, water and noise pollution; (iii) groundwater and soil contamination; (iv) the release or threatened release into the environment of industrial, toxic or hazardous materials or substances, or solid or hazardous waste, including emissions, discharges, injections, spills, escapes or dumping of pollutants, contaminants or chemicals; (v) the protection of wildlife, marine life and wetlands, including all endangered and threatened species; (vi) storage tanks, vessels, containers, abandoned or discarded barrels and other closed receptacles; (vii) health and safety of employees and other persons; and (viii) manufacturing, processing, using, distributing, treating, storing, disposing, transporting or handling of materials

regulated under any law as pollutants, contaminants, toxic or hazardous materials or substances or oil or petroleum products or solid or hazardous waste. As used above, the terms "**release**" and "**environment**" shall have the meaning set forth in the federal Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended ("***CERCLA***"), provided that the term "***release***" shall not include the definitional exclusions of CERCLA and the term "***environment***" shall not include the United States jurisdictional limitations of CERCLA and shall include the indoor environment.

(b) The Company has no liabilities or obligations arising from the release of any Materials of Environmental Concern (as defined below) into the environment. For purposes of this Agreement, "***Materials of Environmental Concern***" shall mean any chemicals, pollutants or contaminants, hazardous substances (as such term is defined under CERCLA), solid wastes and hazardous wastes (as such terms are defined under the Resource Conservation and Recovery Act), toxic materials, oil or petroleum and petroleum products or any other material subject to regulation under any Environmental Law.

(c) The Company is not a party to or bound by any court order, administrative order, consent order or other agreement between the Company and any Governmental Entity entered into in connection with any legal obligation or liability arising under any Environmental Law.

(d) The Company is not aware of any material environmental liability of any solid or hazardous waste transporter or treatment, storage or disposal facility that has been used by the Company.

(e) Set forth in the Schedule of Exceptions is a list of all documents (whether in hard copy or electronic form) that contain any environmental reports, investigations and audits relating to premises currently or previously owned or operated by the Company (whether conducted by or on behalf of the Company or a third party, and whether done at the initiative of the Company or directed by a Governmental Entity or other third party) which the Company has possession of or access to. A complete and accurate copy of each such document has been provided to the Investor.

2.29 ***Disclosure.*** Neither this Agreement nor any Exhibit hereto, nor any report, certificate or instrument furnished by the Company to any of the Investor or its counsel in connection with the transactions contemplated by this Agreement, when read together, contains or will contain any untrue statement of a material fact or omits or will omit to state a material fact necessary in order to make the statements contained herein or therein, in light of the circumstances under which they were made, not misleading.

2.30 ***Bad Actors Matters***. Neither the Company nor, to the Company's knowledge, any of its officers, directors or other affiliates covered under Rule 506(d)(1) promulgated under the Securities Act (excluding for such purposes the Investor) meet any of the disqualifying criteria described in Rule 506(d)(1)(i) through (viii) promulgated under the Securities Act.

SECTION 3

Representations and Warranties of the Investor

The Investor hereby represents and warrants the following as of the date hereof and as of the Closing Date:

3.1 ***Experience***. The Investor has carefully reviewed the representations concerning the Company contained in this Agreement and has sufficient knowledge and experience in finance and business that it is capable of evaluating the risks and merits of its investment in the Company and the Investor is able financially to bear the risks thereof.

3.2 ***Investment***. The Investor is acquiring the Shares for investment for the Investor's own account and not with the view to, or for resale in connection with, any distribution thereof. The Investor understands that the Shares are being issued in a transaction that has not been and will not be registered under the Securities Act by reason of a specific exemption from the registration provisions of the Securities Act which depends upon, among other things, the bona fide nature of the investment intent as expressed herein. The Investor further represents that it does not have any contract, undertaking, agreement or arrangement with any person to sell, transfer or grant participation to any third person with respect to any of the Shares.

3.3 ***Rule 144***. The Investor acknowledges that the Shares must be held indefinitely unless subsequently registered under the Securities Act or an exemption from such registration is available. The Investor is aware of the provisions of Rule 144 promulgated under the Securities Act which permit limited resale of shares purchased in a private placement subject to the satisfaction of certain conditions. In connection therewith, the Investor acknowledges that the Company will make a notation on its stock books regarding the restrictions on transfers set forth in this Section 3 and will transfer the Shares on the books of the Company only to the extent not inconsistent therewith.

3.4 ***Access to Information***. The Investor has received and reviewed information about the Company and has had an opportunity to discuss the Company's business, management and financial affairs with its management and to review the Company's facilities. The Investor has had a full opportunity to ask questions of and receive answers from the Company, or any person or persons acting on behalf of the Company, concerning the terms and conditions of an investment in the Shares. In connection with the purchase of the Shares hereunder, the Investor is not relying upon, and has not relied upon, any statement, representation or warranty made by any person, except for the statements, representations and warranties contained in this Agreement.

3.5 ***Authorization***. The Investor has full power and authority to enter into and to perform this Agreement in accordance with its terms. The Investor represents that it has not been organized, reorganized or recapitalized specifically for the purpose of investing in the Company.

This Agreement has been duly executed and delivered by the Investor and constitutes a valid and binding obligation of the Investor enforceable against the Investor in accordance with their respective terms.

3.6 ***Investor Status***. The Investor acknowledges that it is either (i) an institutional "accredited investor" as defined in Rule 501(a) of Regulation D of the Securities Act (an "*Institutional Accredited Investor*") or (ii) a "qualified institutional buyer" as defined in Rule 144A of the Securities Act, as indicated on Schedule A hereto, and the Investor shall submit to the Company such further assurances of such status as may be reasonably requested by the Company.

3.7 ***No Inducement***. The Investor was not induced to participate in the offer and sale of the Shares by the filing of any registration statement in connection with any public offering of the Company's securities, and the Investor's decision to purchase the Shares hereunder was not influenced by the information contained in any such registration statement.

SECTION 4

Conditions to Investor's Obligations at Closing

The obligations of the Investor under this Agreement are subject to the fulfillment on or before the Closing of each of the following conditions, any of which may be waived in writing by the Investor (except to the extent not permitted by law):

4.1 ***No Injunction, etc***. No preliminary or permanent injunction or other binding order, decree or ruling issued by a court or governmental agency shall be in effect which shall have the effect of preventing the consummation of the transactions contemplated by this Agreement. No action or claim shall be pending before any court or quasi-judicial or administrative agency of any federal, state, local or foreign jurisdiction or before any arbitrator wherein an unfavorable injunction, judgment, order, decree, ruling or charge would be reasonably likely to (i) prevent consummation of any of the transactions contemplated by this Agreement, (ii) cause any of the transactions contemplated by this Agreement to be rescinded following consummation or (iii) have the effect of making illegal the purchase of, or payment for, any of the Shares by the Investor.

4.2 ***Representations and Warranties***. The representations and warranties of the Company contained in Section 2 shall have been true and correct in all material respects (except for such representations and warranties that are qualified by materiality, which shall be true and correct in all respects, and for the representations and warranties contained in Section 2.6, which shall be true and correct in all respects other than *de minimis* exceptions) on and as of the Closing Date, with the same effect as though such representations and warranties had been made on and as of such date, except to the extent expressly made as of a specified date, which shall be true and correct as of such date.

4.3 ***Performance***. The Company shall have performed and complied with all covenants, agreements, obligations and conditions contained in this Agreement that are required to be performed or complied with by it on or before the Closing Date.

4.4 ***Compliance Certificate***. A duly authorized officer of the Company shall deliver to the Investor at the Closing a certificate stating that the conditions specified in Sections 4.2 and 4.3 have been fulfilled and certifying and attaching the Company's Certificate of Incorporation, Bylaws and authorizing Board of Directors resolutions with respect to this Agreement and the transactions contemplated hereby, and shall further certify that under the Restated Certificate 4,722,058 shares have been designated as Series E Preferred, 2,361,029 of which are issued or outstanding.

4.5 ***Securities Laws***. The offer and sale of the Shares to the Investor pursuant to this Agreement shall be exempt from the registration requirements of the Securities Act and the registration and/or qualification requirements of all applicable state securities laws.

4.6 ***Authorizations***. All authorizations, approvals or permits, if any, of any governmental authority or regulatory body that are required in connection with the lawful issuance and sale of the Shares pursuant to this Agreement shall have been duly obtained and shall be effective on and as of the Closing.

4.7 ***Legal Opinion***. The Investor shall have received a legal opinion from Cooley LLP substantially in form and substance reasonably acceptable to the Investor.

4.8 ***Effective Date*****.** The Effective Date (as such term is described in the that certain Collaboration and License Agreement (the "***Collaboration Agreement***"), entered into as of March 12, 2015, between the Company and Novartis Pharmaceuticals Corporation) shall have occurred.

4.9 ***Closing of First Tranche Purchase Agreement***. The closing of the transactions contemplated by the First Tranche Purchase Agreement shall have occurred.

SECTION 5

Conditions to the Company's Obligations at Closing

The obligations of the Company to the Investor under this Agreement are subject to the fulfillment on or before the Closing of each of the following conditions by the Investor:

5.1 ***Representations and Warranties***. The representations and warranties of the Investor contained in Section 3 shall be true and correct in all material respects (except for such representations and warranties that are qualified by materiality which shall be true and correct in all respects) on and as of the Closing with the same effect as though such representations and warranties had been made on and as of the Closing.

5.2 ***Securities Law Compliance.*** The offer and sale of the Shares to the Investor pursuant to this Agreement shall be exempt from the registration requirements of the Securities Act and the registration and/or qualification requirements of all applicable state securities laws.

5.3 ***Authorization***. All authorizations, approvals or permits, if any, of any governmental authority or regulatory body that are required in connection with the lawful issuance and sale of the Shares pursuant to this Agreement shall have been duly obtained and shall be effective on and as of the Closing.

SECTION 6

Investor Covenants

6.1 ***Trading Restrictions***.

(a) Definitions.

(i) "**Affiliate**" shall have the meaning set forth in Rule 12b-2 of the regulations promulgated under the Securities Exchange Act of 1934, as amended (the "***Exchange Act***").

(ii) "**Restriction Period**" shall mean the period commencing on the Closing Date and continuing until the earlier of (A) the two year anniversary of the Closing Date and (B) the date upon which the Collaboration Agreement expires or is terminated in accordance with its terms.

(iii) "**Standstill Period**" shall mean the period commencing on the Effective Date and continuing until the earlier of (i) the two year anniversary thereof and (ii) the date upon which the Collaboration Agreement expires or is terminated in accordance with its terms.

(iv) "**Significant Event**" shall mean any of the following not involving a violation of this Section 6: (A) the public announcement of a proposal or intention to acquire, or the acquisition, by any person or 13D Group of beneficial ownership of Voting Securities representing 15% or more of the then outstanding Voting Securities, or all or substantially all of the assets of the Company; (B) the public announcement of a proposal or intention to commence, or the commencement, by any person or 13D Group of a tender or exchange offer to acquire Voting Securities which, if successful, would result in such person or 13D Group owning, when combined with any other Voting Securities owned by such person or 13D Group, 15% or more of the then outstanding Voting Securities; (C) the entry into by the Company, or the public announcement by the Company of an intention or determination to enter into or commence or continue any discussions relating to, any merger, sale or other business combination transaction, or an agreement therefor, pursuant to which the outstanding shares of capital stock of the Company would be converted into cash, other consideration or securities of another person or 13D Group or 50% or more of the then

outstanding shares of capital stock of the Company would be owned by persons other than the then current holders of shares of capital stock of the Company, or which would result in all or a substantial portion of the Company's assets being sold to any person or 13D Group, or (D) entering into an agreement or commencing a proxy solicitation in which a person or 13D Group would, if successful, elect, or acquire the ability to elect, a majority of the Board of Directors of the Company.

(v) "**Voting Securities**" shall mean at any time shares of any class of capital stock of the Company which are then entitled to vote generally in the election of directors.

(vi) "**13D Group**" shall mean, with respect to the Voting Securities of the Company, any group of persons formed for the purpose of acquiring, holding, voting or disposing of such Voting Securities which would be required under Section 13(d) of the Exchange Act and the rules and regulations thereunder to file a statement on Schedule 13D with the Commission as a "person" within the meaning of Section 13(d)(3) of the Exchange Act if such group beneficially owned Voting Securities representing more than 5% of the total combined voting power of all such Voting Securities then outstanding.

(b) Restriction Period No Sell. The Investor agrees that during the Restriction Period, neither the Investor nor any of its Affiliates shall offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise dispose of in any manner, either directly or indirectly ("***Sale***" or "***Sell***"), any Shares or any securities of the Company issued as a dividend or distribution on, or involving a recapitalization or reorganization with respect to, any of the Shares ("***Covenant Shares***"), other than transfers of securities between and among the Investor and any one or more of its Affiliates. The Company shall use commercially reasonable efforts to permit the Shares to be eligible for clearance and settlement through the facilities of The Depository Trust Company immediately following the termination of the Restriction Period.

(c) Post-Restriction Period Selling Restrictions. During the two years following the expiration of the Restriction Period:

(i) Neither the Investor nor its Affiliates shall Sell a number of Covenant Shares in any three-month period that collectively exceeds 25% of the aggregate Covenant Shares held by the Investor and its Affiliates as of the end of the Restriction Period; and

(ii) For any proposed Sale of 100,000 or more shares of Common Stock of the Company by the Investor or any of its Affiliates in any single transaction or series of related transactions ("***Proposed Sale Shares***"), the Investor shall give the Company at least 10 days prior written notice of such sale. If the Investor provides a notice as provided in the preceding sentence, during such 10-day period, the Company may seek to find a buyer for the Proposed Sale Shares. The limitations and obligations set forth in this Section 6.1(c) shall not apply to any Sale of Covenant Shares taking place between the Investor (and/or any of its Affiliates) and a single buyer; provided that the Investor shall give the Company at least 30 days prior written notice of such Sale.

This Section 6.1(c) shall terminate one year after the expiration or termination of the Collaboration Agreement in accordance with its terms, if such termination occurs prior to the one year anniversary of the expiration of the Restriction Period.

(d) Standstill. The Investor agrees that during the Standstill Period, neither the Investor nor any of its Affiliates shall:

(i) make any statement or proposal to the board of directors of any of the Company, any of the Company's representatives or any of the Company's stockholders regarding, or make any public announcement, proposal or offer (including any "solicitation" of "proxies" as such terms are defined or used in Regulation 14A of the Exchange Act) with respect to, or otherwise solicit, seek or offer to effect (including, for the avoidance of doubt, indirectly by means of communication with the press or media) (i) any business combination, merger, tender offer, exchange offer or similar transaction involving the Company or any of its subsidiaries, (ii) any restructuring, recapitalization, liquidation or similar transaction involving the Company or any of its subsidiaries, (iii) any acquisition of any of the Company's loans, debt securities, equity securities or all or substantially all of the Company's assets, or rights or options to acquire interests in any of the foregoing, (iv) any proposal to seek representation on the board of directors of the Company or otherwise seek to control or influence the management, board of directors or policies of any of the Company or (v) any request or proposal to waive, terminate or amend the provisions of this Section 6.1(d) or (vi) any proposal, arrangement or other statement that is inconsistent with the terms of this Section 6.1(d);

(ii) instigate, encourage or assist any third party (including forming a "group," as defined in the Exchange Act, with any such third party) to do, or enter into any discussions or agreements with any third party with respect to, any of the actions set forth in clause (i) above;

(iii) take any action which would reasonably be expected to require the Company or any of its affiliates to make a public announcement regarding any of the actions set forth in clause (i) above; or

(iv) acquire (or propose or agree to acquire), of record or beneficially, by purchase or otherwise, any loans, equity securities or all or substantially all of the assets of the Company or any of its subsidiaries, or rights or options to acquire interests in any of the foregoing.

Notwithstanding the foregoing, this Section 6.1(d) shall not prohibit the Investor and any of its Affiliates from privately discussing any potential transaction with the Company, or from acquiring and beneficially owning up to ten percent (10%) of the Company's outstanding equity securities (and the Investor and its Affiliates may own an amount in excess of such percentage solely to the extent exclusively resulting from actions taken or permitted by the Company following the acquisition by the Investor and/or its Affiliates of the Company's equity securities, including as a result of a repurchase by the Company of equity securities, any stock split, stock dividend or a recapitalization of the Company).

(e) Occurrence of Significant Event. The restrictions contained in Sections 6.1(b), 6.1(c) and 6.1(d) shall be suspended and shall not apply to or otherwise restrict the Investor's actions in respect of the Company's securities for so long as a Significant Event has occurred and is continuing.

6.2 ***Invalid Transfers***. Any sale, assignment or other transfer of Covenant Shares by the Investor or any of its Affiliates, as applicable, contrary to the provisions of this Section 6 shall be null and void, and the transferee shall not be recognized by the Company as the holder or owner of the Covenant Shares sold, assigned, or transferred for any purpose (including, without limitation, voting or dividend rights), unless and until the Investor or such Affiliate, as applicable, has satisfied the requirements of this Section 6 with respect to such sale. The Company, or, at the instruction of the Company, the transfer agent of the Company, may place a legend on any certificate representing Covenant Shares stating that such shares are subject to the restrictions contained in this Agreement. Upon expiration of the Restriction Period, the Company agrees to facilitate the timely preparation and delivery (but in no event longer than three (3) business days) of certificates representing the Covenant Shares to be sold by the Investor or any Affiliate free of any restrictive legends and in such denominations and registered in such names as the Investor or such Affiliate may request in connection with such sale.

6.3 ***Performance by Affiliates***. The Investor shall remain responsible for and guarantee its Affiliates' performance in connection with this Agreement, and shall cause each such Affiliate to comply fully with the provisions of this Agreement in connection with such performance. The Investor hereby expressly waives any requirement that the Company exhaust any right, power or remedy, or proceed directly against such an Affiliate, for any obligation or performance hereunder, prior to proceeding directly, against the Investor.

6.4 ***Voting Agreement***. The Investor agrees to be bound by and comply with the terms of that certain Amended and Restated Voting Agreement, dated as of December 19, 2014, among the Company, the Purchasers listed on Exhibit A thereto and the Key Holders listed on Exhibit B thereto (the "***Voting Agreement***") as a "Purchaser," and the Shares shall be deemed "Shares" under the Voting Agreement, the terms of which are incorporated herein *mutatis mutandis*.

SECTION 7

Registration Rights

7.1 ***Rule 144 Reporting***. With a view to making available to the Investor the benefits of certain rules and regulations of the Commission which may permit the sale of the Shares to the public without registration, the Company agrees to use commercially reasonable efforts to:

(a) Make and keep public information available, as those terms are understood and defined in Rule 144 promulgated under the Securities Act;

(b) File with the Commission in a timely manner all reports and other documents required of the Company under the Exchange Act; and

(c) Furnish the Investor forthwith upon request (i) a written statement by the Company as to its compliance with the public information requirements of said Rule 144, (ii) a copy of the most recent annual or quarterly report of the Company, and (iii) such other reports and documents as may be reasonably requested in availing the Investor of any rule or regulation of the Commission permitting the sale of any such securities without registration.

7.2 ***Registration.***

(a) If, at the end of the Restriction Period, the Shares cannot be sold without restriction pursuant to Rule 144 promulgated under the Securities Act, then upon Investor's written request, received by the Company on or before the 30th day after the end of the Restriction Period, the Company will use commercially reasonable efforts to register the Shares for resale under the Securities Act on a Registration Statement on Form S-3 (the "***Registration Statement***"), filed within 90 days of such written request, and will use commercially reasonable efforts to have such Registration Statement promptly declared effective by the Commission.

(b) The Company will use commercially reasonable efforts to keep the Registration Statement continuously effective under the Securities Act until the earlier of (i) the date all of the Shares covered by such Registration Statement have been sold or can be sold publicly without restriction or limitation under Rule 144 or (ii) the date that is two years following the Closing Date.

(c) The Investor shall furnish to the Company such information regarding the Investor, and the distribution proposed by the Investor, as the Company may reasonably request in writing and as shall be required in connection with the Registration Statement.

(d) The Company shall pay all fees and expenses incident to the performance of or compliance with this Section 7.2 by the Company.

7.3 ***Restrictive Legend***.

(a) The certificates representing the Shares, when issued, will bear a restrictive legend in substantially the following form:

"THE SECURITIES EVIDENCED OR CONSTITUTED HEREBY HAVE BEEN ISSUED WITHOUT REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "ACT") AND MAY NOT BE SOLD, OFFERED FOR SALE, TRANSFERRED, PLEDGED OR HYPOTHECATED WITHOUT REGISTRATION UNDER THE ACT UNLESS EITHER (i) THE COMPANY HAS RECEIVED AN OPINION OF COUNSEL, IN FORM AND SUBSTANCE REASONABLY SATISFACTORY TO THE COMPANY, TO THE EFFECT THAT REGISTRATION IS NOT REQUIRED IN CONNECTION WITH SUCH DISPOSITION OR (ii) THE SALE OF SUCH SECURITIES IS MADE PURSUANT TO RULE 144 PROMULGATED UNDER THE ACT."

(b) The certificates representing the Shares, when issued, shall not bear the restrictive legend set forth in Section 7.3(a): (i) following a sale of such Shares pursuant to a registration statement covering the resale of such Shares, while such registration statement is effective under the Securities Act, (ii) following any sale of such Shares pursuant to Rule 144 promulgated under the Securities Act ("***Rule 144***"), (iii) if such Shares are eligible for sale under Rule 144, without the requirement for the Company to be in compliance with the current public information required under Rule 144 as to such Shares and without volume or manner-of-sale restrictions or (iv) if such legend is not required under applicable requirements of the Securities Act (including judicial interpretations and pronouncements issued by the staff of the Securities and Exchange Commission). The Company agrees that at such time as the restrictive legend set forth in Section 7.3(a) is no longer required under this section, the Company will (x) no later than five (5) business days following the delivery by the Investor to the Company or the Company's transfer agent of a certificate representing Shares issued with such restrictive legend, deliver or cause to be delivered to the Investor a certificate representing such Shares that is free from such restrictive legend, and (y), in the event that such shares are uncertificated, no later than five (5) business days following the delivery of a written request by the Investor to the Company to remove such restrictive legend, remove, or cause to be removed, any such restrictive legend in the Company's stock records. The Company may not make any notation on its records or give instructions to the Company's transfer agent that enlarge the restrictions on transfer set forth in Sections 6.2, 7.3(a) and 7.4.

7.4 ***"Lock-Up" Agreement; Confidentiality of Notices***. The Investor agrees, if requested by the Company and the managing underwriter of an underwritten initial public offering of the Company's Common Stock (an "***IPO***") (but not for any subsequent offerings) (i) not to (a) offer, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any Shares or other securities of the Company (excluding securities acquired in the public market after the IPO) or (b) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership of any Shares or other securities of the Company (excluding securities acquired in the public market after the IPO), whether any transaction described in clause (a) or (b) is to be settled by delivery of securities, in cash or otherwise, during the period beginning on the date of the filing of such registration statement with the Securities and Exchange Commission and ending on the date specified by the Company and the managing underwriter (such period not to exceed 180 days in the case of an IPO or such other period not to exceed 18 days after the expiration of the 180-day period, as may be requested by the Company or an underwriter to accommodate regulatory restrictions on (1) the publication or other distribution of research reports, and (2) analyst recommendations and opinions, including, but not limited to, the restrictions contained in FINRA Rule 2711(f)(4) or NYSE Rule 472(f)(4), or any successor provisions or amendments thereto), and (ii) to execute any agreement reflecting clause (i) above as may be requested by the Company or the managing underwriters at the time of such offering.

The Company may impose stop-transfer instructions with respect to the Registrable Shares or other securities subject to the foregoing restriction until the end of such "lock-up" period.

As a condition to the obligation of the Investor under this Section 7.4, any "lock-up" obligation of the Investor under this Section 7.4, and any agreement entered into by the Investor as a result of its obligations under this Section 7.4, shall allow for periodic early releases of portions of the securities subject to such "lock-up" obligations, which may be conditioned upon the trading price of the Company's Common Stock.

If the Investor receives any written notice from the Company regarding the Company's plans to file a Registration Statement, the Investor shall treat such notice confidentially and shall not disclose such information to any person other than as necessary to exercise its rights under this Agreement.

SECTION 8

Indemnification

Each party (an "***Indemnifying Party***") hereby indemnifies and holds harmless the other party, such other party's respective officers, directors, employees, consultants, representatives and advisers, and any and all Affiliates (as defined in Section 6.1(a)) of the foregoing (each of the foregoing, an "***Indemnified Party***") from and against all losses, liabilities, costs, damages and expense (including reasonable legal fees and expenses) (collectively, "***Losses***") suffered or incurred by any such Indemnified Party to the extent arising from, connected with or related to (i) breach of any representation or warranty of such Indemnifying Party in this Agreement; and (ii) breach of any covenant or undertaking of any Indemnifying Party in this Agreement. If an event or omission (including, without limitation, any claim asserted or action or proceeding commenced by a third party) occurs which an Indemnified Party asserts to be an indemnifiable event pursuant to this Section 8, the Indemnified Party will provide written notice to the Indemnifying Party, setting forth the nature of the claim and the basis for indemnification under this Agreement. The Indemnified Party will give such written notice to the Indemnifying Party immediately after it becomes aware of the existence of any such event or occurrence. Such notice will be a condition precedent to any obligation of the Indemnifying Party to act under this Agreement but will not relieve it of its obligations under the indemnity except to the extent that the failure to provide prompt notice as provided in this Agreement prejudices the Indemnifying Party with respect to the transactions contemplated by this Agreement and to the defense of the liability. In case any such action is brought by a third party against any Indemnified Party and it notifies the Indemnifying Party of the commencement thereof, the Indemnifying Party will be entitled to participate therein and, to the extent that it wishes, to assume the defense and settlement thereof with counsel reasonably selected by it and, after notice from the Indemnifying Party to the Indemnified Party of such election so to assume the defense and settlement thereof, the Indemnifying Party will not be liable to the Indemnified Party for any legal expenses of other counsel or any other expenses subsequently incurred by such Indemnified Party in connection with the defense thereof, provided, however, that

an Indemnified Party shall have the right to employ separate counsel at the expense of the Indemnifying Party if (i) the employment thereof has been specifically authorized in writing by the Indemnifying Party; or (ii) representation of both parties by the same counsel would be inappropriate due to actual or potential conflicts of interests between such parties (which such judgment shall be made in good faith after consultation with counsel). The Indemnified Party agrees to cooperate fully with (and to provide all relevant documents and records and make all relevant personnel available to) the Indemnifying Party and its counsel, as reasonably requested, in the defense of any such asserted claim at no additional cost to the Indemnifying Party. No Indemnifying Party will consent to the entry of any judgment or enter into any settlement with respect to any such asserted claim without the prior written consent of the Indemnified Party, not to be unreasonably withheld or delayed, (a) if such judgment or settlement does not include as an unconditional term thereof the giving by each claimant or plaintiff to each Indemnified Party of a release from all liability in respect to such claim or (b) if, as a result of such consent or settlement, injunctive or other equitable relief would be imposed against the Indemnified Party or such judgment or settlement could materially and adversely affect the business, operations or assets of the Indemnified Party. No Indemnified Party will consent to the entry of any judgment or enter into any settlement with respect to any such asserted claim without the prior written consent of the Indemnifying Party, not to be unreasonably withheld or delayed. If an Indemnifying Party makes a payment with respect to any claim under the representations or warranties set forth herein and the Indemnified Party subsequently receives from a third party or under the terms of any insurance policy a sum in respect of the same claim, the receiving party will repay to the other party such amount that is equal to the sum subsequently received.

SECTION 9

Miscellaneous

9.1 ***Information and Other Rights***.

(a) For so long as the Investor continues to hold at least 2,250,000 shares of Series E Preferred and/or Common Stock, and until the earlier of the closing of a Company Sale or a Qualified IPO (each as defined in the Amended and Restated Investor Rights Agreement, dated as of December 19, 2014, among the Company and the individuals and entities listed on Exhibit A thereto (the "***Investor Rights Agreement***"), the Company shall provide the Investor with the information set forth in Sections 4.4(a)(i), (ii) and (iv) of the Investor Rights Agreement, the terms of which are incorporated herein *mutatis mutandis*.

(b) For so long as the Investor continues to hold any shares of Series E Preferred, and until the earlier of the closing of a Company Sale or a Qualified IPO, the Company hereby makes the covenants and agreements set forth in Section 4.2 of the Investor Rights Agreement, the terms of which are incorporated herein *mutatis mutandis*.

(c) For so long as the Investor continues to hold any shares of Series E Preferred or Common Stock issuable upon the conversion thereof, and until the earlier of the closing of a Company Sale or a Qualified IPO, the Company hereby makes the covenants and agreements set forth in Sections 4.5, 4.6, 4.7, 4.9, 4.10 and 4.11 of the Investor Rights Agreement, the terms of which are incorporated herein *mutatis mutandis*.

9.2 ***Governing Law***. This Agreement shall be governed in all respects by the laws of the State of Delaware (without reference to the conflicts of law provisions thereof).

9.3 ***Survival***. The representations, warranties, covenants and agreements made herein shall survive any investigation made by the Investor and the Closing.

9.4 ***Successors, Assigns***. Except as otherwise provided herein, the provisions hereof shall inure to the benefit of, and be binding upon, the successors, assigns, heirs, executors and administrators of the parties hereto. This Agreement may not be assigned by either party without the prior written consent of the other; except that either party may assign this Agreement to an Affiliate (as defined in Section 6.1(a)) of such party or to any third party that acquires all or substantially all of such party's business, whether by merger, sale of assets or otherwise.

9.5 ***Notices***. All notices and other communications required or permitted hereunder shall be in writing and shall be sent by facsimile (receipt confirmed) or mailed by registered or certified mail, postage prepaid, return receipt requested, or otherwise delivered by hand or by messenger, addressed

if to the Investor, at the following address:

Novartis Institutes for BioMedical Research, Inc.
250 Massachusetts Avenue
Cambridge, MA 02139
Attention: General Counsel
Facsimile: (617) 871-5786

with a copy (which shall not constitute notice) to:

Kaye Scholer LLP
250 West 55th Street
New York, New York 10019-9710
Attention: Thomas Yadlon
Facsimile: (212) 836-6567

if to the Company, at the following address:

Aduro Biotech, Inc.
626 Bancroft Way #3C

Berkeley, CA 94710
Attention: President
Facsimile: (510) 848-5614

with a copy (which shall not constitute notice) to:

Cooley LLP
3175 Hanover Street
Palo Alto, California 94304
Attention: Michael Tenta
Facsimile: (650) 849-7400

or at such other address as one party shall have furnished to the other party in writing. If notice is provided by facsimile, it shall be deemed to be given one (1) business day after transmission (with receipt of appropriate confirmation). If notice is provided by U.S. mail, notice shall be deemed to be given four (4) days after proper deposit in a U.S. mailbox, postage prepaid, and properly addressed. If notice is provided by a messenger service that guarantees "next business day" delivery, it shall be deemed effective one (1) business day after deposit with such messenger service.

9.6 ***Expenses***. Each of the Company and the Investor shall bear its own expenses and legal fees incurred on its behalf with respect to this Agreement and the transactions contemplated hereby.

9.7 ***Confidentiality***.

(a) Subject to the other provisions of this Section 9.7, the existence of this Agreement and the terms and conditions of this Agreement (collectively, the "***Confidential Information***") will be maintained in confidence and otherwise safeguarded by the parties to this Agreement. Subject to the other provisions of this Section 9.7, each party shall hold as confidential such Confidential Information in the same manner and with the same protection as such party maintains its own confidential information. Subject to the other provisions of this Section 9.7, a party may only disclose Confidential Information to its employees, representatives, agents, sublicensees, subcontractors, consultants and advisers and its affiliates to the extent reasonably necessary for the purposes of, and for those matters undertaken pursuant to, this Agreement; provided that such persons are bound to maintain the confidentiality of the Confidential Information in a manner consistent with the confidentiality provisions of this Agreement.

(b) The obligations under this Section 9.7 shall not apply to any information to the extent the disclosing party can demonstrate by competent evidence that such information is (at the time of disclosure) or becomes (after the time of disclosure) known to the public or part of the public domain through no breach of this Agreement by such party or its affiliates.

(c) In addition to disclosures allowed under Section 9.7(b), each party may disclose Confidential Information solely to the extent such disclosure is necessary in the following

instances: (i) complying with applicable law, court orders or governmental regulations, including rules of self-regulatory organizations and Securities and Exchange Commission filing and disclosure requirements or (ii) to potential or actual investors or acquirers as may be necessary in connection with their evaluation of a potential or actual investment or acquisition; provided that such persons shall be subject to obligations of confidentiality and non-use at least as protective as those set forth in this Section 9.7.

(d) In the event a party is required to disclose Confidential Information by law, applicable court order or governmental regulation or in connection with bona fide legal process, such disclosure shall not be a breach of this Agreement; provided that such party (i) informs the other party as soon as reasonably practicable of the required disclosure; (ii) limits the disclosure to that which is legally required to be disclosed; and (iii) at the other party's request and expense, assists in an attempt to object to or limit the required disclosure.

(e) Either party may disclose the existence and terms of this Agreement in confidence to its attorneys and advisors, and to potential acquirers (and their respective professional attorneys and advisors), in connection with a potential merger, acquisition or reorganization and to existing and potential investors or lenders of such party, as part of their due diligence investigations, or to existing and potential licensees or sublicensees or to permitted assignees, in each case under an agreement to keep the terms of confidentiality and non-use substantially no less rigorous than the terms contained in this Agreement and to use such information solely for the purpose permitted pursuant to this Section 9.7(e).

9.8 ***Finder's Fees***. Each of the Company and the Investor shall indemnify and hold the other harmless from any liability for any commission or compensation in the nature of a finder's fee, placement fee or underwriter's discount (including the costs, expenses and legal fees of defending against such liability) for which the Company or the Investor, or any of its respective partners, employees, or representatives, as the case may be, is responsible.

9.9 ***Counterparts***. This Agreement may be executed in counterparts, each of which shall be enforceable against the party actually executing the counterpart, and all of which together shall constitute one instrument.

9.10 ***Severability***. In the event that any provision of this Agreement becomes or is declared by a court of competent jurisdiction to be illegal, unenforceable or void, this Agreement shall continue in full force and effect without said provision; provided that no such severability shall be effective if it materially changes the economic benefit of this Agreement to any party.

9.11 ***Entire Agreement***. This Agreement, including the exhibits and schedule attached hereto, constitute the full and entire understanding and agreement among the parties with regard to the subjects hereof and thereof. No party shall be liable or bound to any other party in any manner with regard to the subjects hereof or thereof by any warranties, representations or covenants except as specifically set forth herein or therein.

9.12 ***Waiver***. The failure of either party to assert a right hereunder or to insist upon compliance with any term or condition of this Agreement shall not constitute a waiver of that right or excuse a similar subsequent failure to perform any such term or condition by the other party. None of the terms, covenants and conditions of this Agreement can be waived except by the written consent of the party waiving compliance.

9.13 ***Termination***. This Agreement shall terminate automatically if the Collaboration Agreement is terminated pursuant to its terms prior to the consummation of the Closing.

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Exhibit 23.2

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the use in this Registration Statement on Form S-1 of our report dated March 2, 2015, (April 3, 2015 as to the effects of the reverse stock split and subsequent event described in Note 17) relating to the financial statements of Aduro Biotech, Inc. (which report expresses an unqualified opinion) appearing in the Prospectus, which is part of this Registration Statement.

We also consent to the reference to us under the heading “Experts” in such Prospectus.

/s/ Deloitte & Touche LLP

San Francisco, California
April 3, 2015