Use these links to rapidly review the document
TABLE OF CONTENTS
TRACON Pharmaceuticals, Inc. Index to Financial Statements

Table of Contents

As filed with the Securities and Exchange Commission on January 20, 2015

Registration No. 333-201280

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

TRACON PHARMACEUTICALS, INC.
(Exact Name of Registrant as Specified in Its Charter)

Delaware	**2836**	**34-2037594**
(State or Other Jurisdiction of Incorporation or Organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

8910 University Center Lane, Suite 700
San Diego, California 92122
(858) 550-0780
(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Charles P. Theuer, M.D., Ph.D.
President and Chief Executive Officer
TRACON Pharmaceuticals, Inc.
8910 University Center Lane, Suite 700
San Diego, California 92122
(858) 550-0780
(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

Copies to:

Charles S. Kim, Esq. **Sean M. Clayton, Esq.** **Kristin E. VanderPas, Esq.** **Cooley LLP** **4401 Eastgate Mall** **San Diego, California 92121** **(858) 550-6000**	**Cheston J. Larson, Esq.** **Matthew T. Bush, Esq.** **Latham & Watkins LLP** **12670 High Bluff Drive** **San Diego, California 92130** **(858) 523-5400**

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 of 1933, as amended (the "Securities Act"), check the following box. o

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) 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. o

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. o

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. o

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 Securities Exchange Act of 1934, as amended.

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

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered fee[1]	Proposed maximum aggregate offering price[1]	Amount of registration[2]
Common Stock, $0.001 par value per share	$57,960,000	$6,735

(1) Estimated solely for the purpose of calculating the amount of the registration fee in accordance with Rule 457(o) under the Securities Act. Includes the offering price of shares that the underwriters have the option to purchase to cover over-allotments, if any.

(2) The Registrant previously paid $6,682 of the registration fee in connection with the initial filing of this 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 that 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.

Table of Contents

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.

PROSPECTUS **SUBJECT TO COMPLETION, DATED JANUARY 20, 2015**

TRACON Pharmaceuticals, Inc.

3,600,000 Shares

Common Stock

This is the initial public offering of common stock of TRACON Pharmaceuticals, Inc. We are offering 3,600,000 shares of common stock. We estimate that the initial public offering price of our common stock will be between $12.00 and $14.00 per share.

Prior to this offering, there has been no public market for our common stock. We have filed an application for our common stock to be listed on The NASDAQ Global Market under the symbol "TCON."

Investing in our common stock involves risks. See the section entitled "Risk Factors" beginning on page 12.

	Per share	Total
Initial price to public	$	$
Underwriting discounts and commissions[(1)]	$	$
Proceeds, before expenses, to TRACON Pharmaceuticals, Inc.	$	$

(1) We refer you to the section entitled "Underwriting" for additional information regarding underwriting compensation.

Certain of our existing stockholders and their affiliated entities, including stockholders affiliated with our directors, have indicated an interest in purchasing up to approximately $8.2 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. The underwriters will receive the same underwriting discount on any shares purchased by these entities as they will on any other shares sold to the public in this offering.

In addition, New Enterprise Associates 14, L.P., an existing stockholder, has indicated an interest in purchasing up to approximately $5.0 million of shares of our common stock at the initial public offering price in a proposed private placement that would close concurrently with this offering. This indication of interest is not a binding agreement or commitment to purchase, and we could determine to sell more, less or no shares to this stockholder and this stockholder could determine to purchase more, less or no shares in the proposed concurrent private placement. The underwriters will serve as placement agents for such concurrent private placement and receive a placement agent fee equal to a percentage of the total purchase price of the private placement shares, which percentage will be equal to the percentage discount the underwriters will receive on shares sold in this offering. The closing of this offering is not conditioned upon the closing of such concurrent private placement.

We have granted the underwriters a 30-day option to purchase up to an additional 540,000 shares of common stock from us at the initial public offering price less the underwriting discounts and commissions.

We are an "emerging growth company" as that term is used in the Jumpstart Our Business Startups Act of 2012 and, as such, have elected to comply with certain reduced public company reporting requirements for this prospectus and future filings.

None of the Securities and Exchange Commission, any state securities commission, or any other regulatory body 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 underwriters expect to deliver the shares on or about , 2015.

Wells Fargo Securities **Stifel**

Needham & Company **Oppenheimer & Co.**

Prospectus dated , 2015.

TABLE OF CONTENTS

Neither we nor any of the underwriters has authorized anyone to provide you with information different from, or in addition to, that contained in this prospectus or any free writing prospectus prepared by or on behalf of us and to which we may have referred you in connection with this offering. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. Neither we nor any of the underwriters is making an offer to sell or seeking offers to buy these securities in any jurisdiction where or to any person to whom the offer or sale is not permitted. The information in this prospectus is accurate only as of the date on the front cover of this prospectus, regardless of the time of delivery of this prospectus or of any sale of shares of our common stock and the information in any free writing prospectus that we may provide you in connection with this offering is accurate only as of the date of that free writing prospectus. Our business, financial condition, results of operations and prospects may have changed since those dates.

This prospectus includes statistical and other industry and market data that we obtained from industry publications and research, surveys and studies conducted by third parties. Industry publications and third-party research, surveys and studies generally indicate that their information has been obtained from sources believed to be reliable, although they do not guarantee the accuracy or completeness of such information.

For investors outside the United States: neither we nor any of the underwriters has done anything that would permit this offering or possession or distribution of this prospectus or any free writing prospectus we may provide to you in connection with this offering in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus and any free writing prospectus outside of the United States.

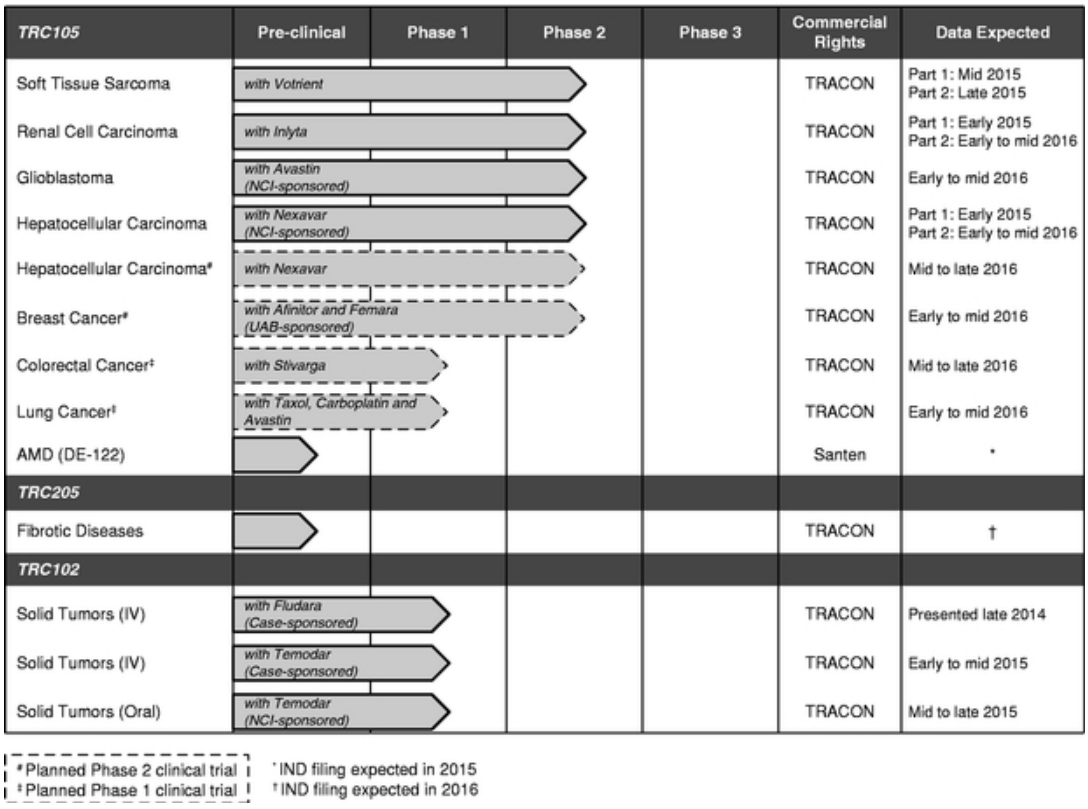
SUMMARY

This summary highlights information contained in other parts of this prospectus. Because it is only a summary, it does not contain all of the information that yo should consider before investing in shares of our common stock and it is qualified in its entirety by, and should be read in conjunction with, the more detailed information appearing elsewhere in this prospectus. Unless the context requires otherwise, references in this prospectus to "TRACON," "we," "us" and "our" refer to TRACON Pharmaceuticals, Inc.

Overview

We are a clinical stage biopharmaceutical company focused on the development and commercialization of novel targeted therapeutics for cancer, age-related macular degeneration, or AMD, and fibrotic diseases. We are a leader in the field of endoglin biology and are using our expertise to develop antibodies that bind to th endoglin receptor. Endoglin is essential to angiogenesis, the process of new blood vessel formation, and a key contributor to the development of fibrosis, or tissue scarring. Our lead product candidate, TRC105, is an anti-endoglin antibody that is being developed for the treatment of multiple solid tumor types in combination wit inhibitors of the vascular endothelial growth factor, or VEGF, pathway. Our other product candidates are TRC205, an anti-endoglin antibody that is in preclinical development for the treatment of fibrotic diseases, and TRC102, a small molecule that is in clinical development for the treatment of lung cancer and glioblastoma. In March 2014, Santen Pharmaceutical Co., Ltd., or Santen, a global ophthalmology company, licensed from us exclusive worldwide rights to develop and commercializ our anti-endoglin antibodies for ophthalmology indications, including AMD. We retain global rights to develop and commercialize our anti-endoglin antibodies outside of the field of ophthalmology, as well as global rights to TRC102 in all indications.

The following chart summarizes key information regarding ongoing and planned development of our product candidate pipeline:



We operate a clinical development model that emphasizes capital efficiency. Our experienced clinical operations and regulatory affairs groups enable us to eliminate the cost associated with hiring contract research organizations to manage clinical, regulatory and database aspects of our Phase 1 and Phase 2 clinical trials. We have also collaborated with the National Cancer Institute, or NCI, which has selected TRC105 and TRC102 for federal funding of clinical development, as well as Case Western Reserve University, or Case Western. Under these collaborations, NCI has sponsored or is sponsoring seven completed or ongoing clinical trials of TRC105 and TRC102, and Case Western is sponsoring two ongoing clinical trials of TRC102. In addition, certain manufacturers of approved VEGF inhibitors that w are studying in combination with TRC105 have agreed to supply their drug at no cost for use in the applicable clinical trials.

The Endoglin Pathway: A Promising Approach to Treating Cancer, AMD and Fibrotic Diseases

We focus on developing antibodies that target the endoglin receptor. Endoglin is a protein that is overexpressed on endothelial cells, the cells that line the interio surface of blood vessels, when they experience hypoxia, which is a condition characterized by inadequate oxygen supply. Endoglin allows endothelial cells to proliferate in a hypoxic environment and is required for angiogenesis. These properties render endoglin an attractive target for the treatment of diseases that require angiogenesis, including cancer and AMD, especially in combination with VEGF inhibitors. Endoglin is also expressed on fibroblasts, the cells that mediate fibrosis, and is a key contributor to the development of fibrosis.

VEGF, like endoglin, is required for angiogenesis. Several anti-angiogenesis therapies that inhibit the VEGF pathway are currently marketed for the treatment c cancer or AMD, including Avastin (bevacizumab), Inlyta (axitinib), Nexavar (sorafenib), Sutent (sunitinib malate), Votrient (pazopanib), Eylea (aflibercept) and Lucentis (ranibizumab). VEGF inhibitors collectively represent more than $10.0 billion annually in reported global sales in oncology indications and more than $6.0 billion in ophthalmology indications. Although VEGF therapies have been clinically and commercially successful, nearly all cancer patients develop resistance t these therapies and many do not respond at the outset. This resistance results in continued unwanted angiogenesis and subsequent tumor growth and progression of AMD.

We believe the endoglin pathway serves as the dominant escape pathway that allows continued angiogenesis despite inhibition of the VEGF pathway. Preclinica studies indicate that endoglin expression promotes resistance to inhibitors of the VEGF pathway. These studies suggest that targeting the endoglin pathway in addition to the VEGF pathway is a more effective means to inhibit angiogenesis than targeting the VEGF pathway alone, particularly given the development of resistance to VEGF inhibitors.

Our Novel Anti-Endoglin Antibody Candidates

TRC105 for Oncology

Our lead anti-endoglin antibody, TRC105, binds to the endoglin receptor at a precise location to inhibit endothelial cell activation and angiogenesis. Separate trials assessing the combination of TRC105 and the VEGF inhibitors Avastin or Inlyta demonstrated durable anti-tumor activity in advanced cancer patients whose cancer had progressed on prior VEGF inhibitor treatment. Specifically, in a Phase 1/2 clinical trial of TRC105 with Avastin that primarily enrolled patients with colorectal and ovarian cancer whose cancer had progressed on prior Avastin treatment, of 25 evaluable patients treated previously with VEGF inhibitors, 16 patients (64%) had stable disease, of whom 10 patients (40%) had partial responses. Six responding patients treated with prior VEGF inhibitors (24%) remained without cance progression longer than during their prior VEGF inhibitor therapy, and were therefore considered to have durable

responses. Additionally, in the ascending dose portion of a Phase 2 clinical trial of TRC105 with Inlyta in patients with renal cell carcinoma, 10 of the 17 patients (59%) demonstrated partial responses. A Phase 2 randomized clinical trial of TRC105 with Avastin in patients with all histologies of renal cell carcinoma, which is being sponsored by NCI and included patients previously treated with up to four VEGF inhibitors, closed enrollment after an interim analysis concluded the trial was unlikely to achieve the endpoint of a 100% increase in progression-free survival. We are sponsoring a Phase 2 randomized trial of TRC105 with Inlyta in patients with renal cell carcinoma with only clear cell histology who were treated with only one prior VEGF inhibitor. The primary endpoint of this trial is a 50% increase in progression-free survival, which is a more typical endpoint for Phase 2 oncology trials. We expect topline data in both Phase 2 renal cell carcinoma trials by early to mid 2016.

TRC105 is also being studied in combination with VEGF inhibitors in three additional Phase 2 clinical trials for soft tissue sarcoma, glioblastoma and hepatocellular carcinoma. In the ascending dose portion of a Phase 2 clinical trial of TRC105 with Nexavar in patients with hepatocellular carcinoma, three of the 13 patients (23%) treated at recommended Phase 2 doses of TRC105 (10 mg/kg or 15 mg/kg) demonstrated partial responses, in a setting where the expected partial response rate of Nexavar alone is 2%. In the ascending dose portion of a Phase 2 clinical trial of TRC105 with Votrient, several patients have demonstrated tumor reductions, and a patient with angiosarcoma has an ongoing complete response to treatment. We are also planning to conduct additional clinical trials of TRC105 in combination with existing treatments, including a Phase 2 clinical trial in patients with breast cancer, a Phase 1 clinical trial in patients with colorectal cancer and a Phase 1 clinical trial in patients with lung cancer. We expect topline data in each of our ongoing clinical trials by late 2015 to mid 2016 and, if results are positive, we expect to initiate Phase 3 clinical trials for one or more initial indications of soft tissue sarcoma, renal cell carcinoma, glioblastoma and hepatocellular carcinoma by the end of 2016. We consider these initial indications attractive because the endpoints for regulatory approval may be attained more quickly than the endpoints for other indications.

DE-122 for Wet Age-Related Macular Degeneration

Wet AMD, the leading cause of blindness in the Western world, is caused by abnormal angiogenesis that results in fluid leaking into the retina. We believe that by targeting the endoglin pathway concurrently with the VEGF pathway, our anti-endoglin antibodies may enhance the ability of VEGF inhibitors to inhibit angiogenesis and improve the treatment of wet AMD.

In March 2014, Santen licensed from us exclusive worldwide rights to develop and commercialize our anti-endoglin antibodies, including TRC105 and TRC205, for ophthalmology indications. Santen is expected to file an Investigational New Drug application, or IND, for the development of TRC105 for ophthalmology indications under the name DE-122.

TRC205 for Fibrotic Diseases

Preclinical data from Tufts Medical Center identified increased endoglin expression on fibroblasts in patients with heart failure and demonstrated that inhibiting endoglin limits transforming growth factor beta, or TGF-b, signaling and production of fibrotic proteins by human cardiac fibroblasts. Inhibiting endoglin function decreased fibrosis in models of cardiac and liver fibrosis. We are developing TRC205, a humanized, deimmunized anti-endoglin antibody, for the treatment of fibrotic diseases. We expect to initiate clinical development of TRC205 in fibrotic diseases in 2016.

TRC102: Small Molecule Inhibitor of DNA Repair for Cancer Treatment

We are developing TRC102 to reverse resistance to specific chemotherapeutics by inhibiting base-excision repair, or BER. BER is a complex and fundamental cellular process used by cancer cells to repair the DNA damage caused by chemotherapeutics, including Temodar (temozolomide), Alimta (pemetrexed) and Fludara (fludarabine), which are approved for the treatment of glioblastoma, lung cancer and lymphoma, respectively.

We completed a Phase 1 clinical trial of TRC102 in combination with Alimta, which demonstrated anti-tumor activity. Patients who received TRC102 and Alimta demonstrated reduction in tumor masses, including partial response, and lung cancer patients with squamous histology, a tumor type resistant to Alimta treatment, demonstrated stable disease. TRC102 is currently being studied in combination with the approved chemotherapy drugs Temodar and Fludara in Phase 1 clinical trials. Based on correspondence with NCI in June 2014, we expect NCI to sponsor a Phase 1/2 clinical trial of TRC102 with Temodar in patients with glioblastoma, a Phase 1 clinical trial of TRC102 with Alimta and cisplatin in patients with mesothelioma, a Phase 2 clinical trial of TRC102 with Alimta in patients with lung cancer and a Phase 1 clinical trial of TRC102 with Alimta, cisplatin and radiation therapy in patients with lung cancer.

Our Strategy

Our goal is to be a leader in the development of targeted therapies for patients with cancer and other diseases of high unmet medical need. As key components o our strategy, we intend to:

- ***Focus clinical development of TRC105 on initial oncology indications with potential reduced time to regulatory approval.*** We plan to continue Phase 2 development of TRC105 in combination with approved VEGF inhibitors in our initial oncology indications of soft tissue sarcoma, renal cell carcinoma, glioblastoma and hepatocellular carcinoma, each of which is associated with reduced time to achieve the endpoints necessary for regulatory approval, with the goal of being ready to initiate one or more Phase 3 clinical trials by the end of 2016.

- ***Expand development program for TRC105 into large market oncology indications.*** To maximize the commercial opportunity of TRC105, we intend to continue developing TRC105 in additional oncology indications with large patient populations.

- ***Continue to leverage our collaborative relationship with NCI to accelerate and broaden development of TRC105 and TRC102.*** We anticipate that NCI will complete ongoing Phase 2 clinical trials of TRC105 and may initiate other Phase 2 clinical trials in addition to the Phase 2 clinical trials of TRC105 that we are sponsoring. Based on correspondence with NCI in June 2014, we expect that Phase 2 clinical trials of TRC102 will be completed with NCI funding. If merited by Phase 2 data, we expect to fund initial Phase 3 clinical trials of TRC105 and TRC102 and, based on NCI's past course of conduct with similarly situated pharmaceutical companies in which it has sponsored pivotal clinical trials following receipt of positive Phase 2 data we anticipate that NCI will sponsor Phase 3 clinical trials in additional indications.

- ***Support Santen during preclinical development to advance DE-122 into clinical trials in wet AMD.*** We are using our expertise in the development o anti-endoglin antibodies to assist Santen in the manufacture and preclinical testing of DE-122.

- ***Continue preclinical studies and initiate clinical development of TRC205 in fibrotic diseases.*** TRC205, a humanized and deimmunized anti-endoglin antibody, is our lead product candidate for the treatment of fibrotic diseases, including nonalcoholic

steatohepatitis, or NASH, and idiopathic pulmonary fibrosis, or IPF, each of which presents a large commercial opportunity and has no approved therapies in the United States.

- ***Leverage internal capabilities to advance other programs efficiently and cost effectively through clinical development.*** We have assembled a management team that has contributed to the approval of seven therapeutics, including VEGF inhibitors in cancer and in AMD, and that has core competencies relating to clinical operations and regulatory affairs. We expect to continue to benefit from these capabilities through the development of additional early and mid-stage assets, both from internal programs and potential in-licensed programs.

Risks Associated with Our Business

Our business is subject to numerous risks, as more fully described in the section entitled "Risk Factors" immediately following this prospectus summary. You should read these risks before you invest in our common stock. We may be unable, for many reasons, including those that are beyond our control, to implement our business strategy. In particular, risks associated with our business include:

- We have incurred losses from operations since our inception and anticipate that we will continue to incur substantial operating losses for the foreseeab future. We may never achieve or sustain profitability.
- We will require substantial additional financing to achieve our goals, and failure to obtain additional financing when needed could force us to delay, limit, reduce or terminate our drug development efforts.
- We are heavily dependent on the success of our lead product candidate TRC105, which is in a later stage of development than our other product candidates. We cannot give any assurance that TRC105 will successfully complete clinical development or receive regulatory approval, which is necessary before it can be commercialized.
- Clinical development is a lengthy and expensive process with an uncertain outcome, and results of earlier studies and trials may not be predictive of future trial results. Failure can occur at any stage of clinical development.
- Delays in clinical trials are common and have many causes, and any delay could result in increased costs to us and jeopardize or delay our ability to obtain regulatory approval and commence product sales.
- The regulatory approval processes of the U.S. Food and Drug Administration, or FDA, and comparable foreign authorities are lengthy, time consumin and inherently unpredictable, and if we are ultimately unable to obtain regulatory approval for our product candidates, our business will be substantiall harmed.
- We depend in part on NCI to advance clinical development of TRC105 and TRC102 and also depend in part on Case Western to advance clinical development of TRC102.
- We are dependent on our license agreement with Santen to develop and commercialize our anti-endoglin antibodies, including DE-122, in the field of ophthalmology. The failure to maintain our agreement with Santen or the failure of Santen to perform its obligations under the agreement, could negatively impact our business.
- We may be unable to adequately maintain and protect our intellectual property rights, which could impair the advancement of our product pipeline and our commercial opportunities.

- We face intense competition and rapid technological change and the possibility that our competitors may develop therapies that are more advanced or effective than ours, which may adversely affect our financial condition and our ability to successfully commercialize our product candidates.

Concurrent Private Placement

New Enterprise Associates 14, L.P., or NEA, an existing stockholder, has indicated an interest in purchasing up to approximately $5.0 million of shares of our common stock at the initial public offering price in a proposed private placement that would close concurrently with this offering. This indication of interest is not a binding agreement or commitment to purchase, and we could determine to sell more, less or no shares to this stockholder and this stockholder could determine to purchase more, less or no shares in the proposed concurrent private placement. The shares that may be sold in the proposed concurrent private placement will constitute restricted securities under the Securities Act of 1933, as amended. The underwriters will serve as placement agents for such concurrent private placement and will receive a placement agent fee equal to a percentage of the total purchase price of the private placement shares, which percentage will be equal to the percentage discount the underwriters will receive on shares sold in this offering. The closing of this offering is not conditioned upon the closing of such concurrent private placement.

Corporate Information

We were incorporated in the state of Delaware in October 2004 as Lexington Pharmaceuticals, Inc. and we subsequently changed our name to TRACON Pharmaceuticals, Inc. in March 2005, at which time we relocated to San Diego, California. Our principal executive offices are located at 8910 University Center Lane Suite 700, San Diego, California 92122, and our telephone number is (858) 550-0780. Our corporate website is www.traconpharma.com. The information on, or that can be accessed through, our website is not part of this prospectus, and you should not rely on any such information in making the decision whether to purchase our common stock.

We have obtained registered trademarks for TRACON® and TRACON PHARMA® in the United States. This prospectus contains references to our trademarks and to trademarks belonging to other entities. Solely for convenience, trademarks and trade names referred to in this prospectus, including logos, artwork and other visual displays, may appear without the ® or ™ symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent unde applicable law, our rights or the rights of the applicable licensor to these trademarks and trade names. We do not intend our use or display of other companies' trade names or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

Implications of Being an Emerging Growth Company

As a company with less than $1.0 billion in revenue during our last fiscal year, we qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act, or the JOBS Act, enacted in April 2012. Section 107 of the JOBS Act provides that an "emerging growth company" can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act of 1933, as amended, or the Securities Act, for complying with new or revised accounting standards. In other words, an "emerging growth company" can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this extended transition period and, as a

result, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

We are in the process of evaluating the benefits of relying on other exemptions and reduced reporting requirements provided by the JOBS Act. Subject to certai conditions set forth in the JOBS Act, as an "emerging growth company," we intend to rely on certain of these exemptions, including without limitation, (1) providing an auditor's attestation report on our system of internal controls over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act and (2) complying with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements, known as the auditor discussion and analysis.

We will remain an "emerging growth company" until the earliest of (1) the last day of the fiscal year in which we have total annual gross revenues of $1.0 billio or more, (2) the last day of our fiscal year following the fifth anniversary of the date of the closing of this offering, (3) the date on which we have issued more than $1.0 billion in non-convertible debt during the previous three years or (4) the date on which we are deemed to be a large accelerated filer under the rules of the U.S. Securities and Exchange Commission, or SEC, with at least $700.0 million of outstanding equity securities held by non-affiliates.

The Offering

Common stock offered by us in this offering	3,600,000 shares
Common stock to be sold by us to NEA in the concurrent private placement	NEA has indicated an interest in purchasing up to approximately $5.0 million of shares of our common stock at a price per share equal to the initial public offering price (or 384,615 shares based on the assumed initial public offering price of $13.00 per share) in a proposed private placement that would close concurrently with this offering. See "Certain Relationships and Related Party Transactions—Concurrent Private Placement."
Common stock to be outstanding after this offering and the concurrent private placement	11,977,421 shares
Option to purchase additional shares	The underwriters have an option for a period of 30 days to purchase up to 540,000 additional shares of our common stock.
Use of proceeds	The net proceeds from this offering will be approximately $40.4 million, or approximately $47.0 million if the underwriters exercise their option to purchase additional shares in full, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. In addition, we expect to receive net proceeds of $4.6 million from the sale of shares of common stock to NEA in the concurrent private placement, after deducting estimated placement agent fees and expenses payable by us. We intend to use the net proceeds of this offering: (1) to initiate manufacturing activities required for regulatory approval; (2) to initiate clinical and regulatory activities for our anticipated initial Phase 3 clinical trial of TRC105 and to fund additional Phase 1 or Phase 2 clinical trials of TRC105 in large market oncology indications; (3) to provide clinical supply of TRC102 for and to provide support for NCI's conduct of our four anticipated Phase 1 or Phase 2 clinical trials of TRC102 in combination with chemotherapeutics; (4) to fund our preclinical studies of TRC205 in non-cardiac and cardiac models of fibrosis and obtain the supply of TRC205 for our anticipated Phase 1 clinical trials; and (5) the remainder for working capital and other general corporate purposes, including funding the costs of operating as a public company. We expect to use the net proceeds from the concurrent private placement for additional working capital and general corporate purposes. See "Use of Proceeds."

Risk factors	You should read the "Risk Factors" section of this prospectus for a discussion of factors to consider carefully before deciding to invest in shares of our common stock.
Proposed NASDAQ Global Market symbol	TCON

The number of shares of our common stock to be outstanding after this offering and the concurrent private placement is based on 7,992,806 shares of common stock outstanding as of September 30, 2014, and excludes:

- 709,028 shares of common stock issuable upon the exercise of outstanding stock options as of September 30, 2014, at a weighted-average exercise price of $1.36 per share;
- 38,758 shares of common stock issuable upon the exercise of outstanding warrants as of September 30, 2014, at an exercise price of $7.74 per share;
- 183,462 shares of common stock reserved for future issuance under our 2015 employee stock purchase plan, or the ESPP, which will become effective upon the execution and delivery of the underwriting agreement for this offering; and
- 801,033 shares of common stock reserved for future issuance under our 2015 equity incentive plan, or the 2015 plan, which will become effective upo the execution and delivery of the underwriting agreement for this offering, plus 353,560 shares of common stock reserved for issuance under our 2011 equity incentive plan, or the 2011 plan, as of September 30, 2014, which shares will be added to the shares reserved under the 2015 plan upon its effectiveness.

Unless otherwise indicated, all information contained in this prospectus assumes:

- the conversion of all our outstanding redeemable convertible preferred stock as of September 30, 2014 into an aggregate of 6,369,567 shares of common stock, which will occur automatically in connection with the closing of this offering;
- the adjustment of outstanding warrants to purchase 150,000 shares of our redeemable convertible preferred stock into warrants to purchase 38,758 shares of common stock, which will occur automatically in connection with the closing of this offering;
- no exercise by the underwriters of their option to purchase up to an additional 540,000 shares of our common stock from us to cover over-allotments, i any;
- that the initial public offering price of our shares of common stock will be $13.00 per share (which is the midpoint of the estimated price range set fort on the cover page of this prospectus);
- the filing of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws immediately prior to the closir of this offering; and
- a 1-for-3.87 reverse stock split of our common stock effected in January 2015.

Certain of our existing stockholders and their affiliated entities, including stockholders affiliated with our directors, have indicated an interest in purchasing up approximately $8.2 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 partie may determine to purchase more, fewer or no shares in this offering. The underwriters will receive the same underwriting discount on any shares purchased by these entities as they will on any other shares sold to the public in this offering.

Summary Financial Data

The following tables set forth a summary of our financial data as of, and for the periods ended on, the dates indicated. The summary statement of operations dat for the years ended December 31, 2012 and 2013 are derived from our audited financial statements and related notes appearing elsewhere in this prospectus. The summary statement of operations data for the nine months ended September 30, 2013 and 2014 and balance sheet data as of September 30, 2014 are derived from our unaudited financial statements and related notes appearing elsewhere in this prospectus. The unaudited financial statements have been prepared on a basis consistent with our audited financial statements included in this prospectus and, in the opinion of management, reflect all adjustments, consisting only of normal recurring adjustments, necessary to fairly state our financial position as of September 30, 2014 and results of operations for the nine months ended September 30, 2013 and 2014. You should read this data together with our financial statements and related notes appearing elsewhere in this prospectus and the information included in sections of this prospectus entitled "Selected Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations." Our historical results are not necessarily indicative of results that may be expected in the future and results of interim periods are not necessarily indicative of the results fo the entire year.

	Years Ended December 31,		Nine Months Ended September 30,	
	2012	2013	2013	2014
			(unaudited)	
	(in thousands, except share and per share data)			
Statement of Operations Data:				
Collaboration revenue	$ —	$ —	$ —	$ 2,558
Operating expenses:				
Research and development	3,777	6,076	4,316	5,090
General and administrative	1,449	1,484	1,096	1,394
Total operating expenses	5,226	7,560	5,412	6,484
Loss from operations	(5,226)	(7,560)	(5,412)	(3,926)
Other income (expense)	298	(148)	(84)	(334)
Net loss	(4,928)	(7,708)	(5,496)	(4,260)
Accretion to redemption value of redeemable convertible preferred stock	(216)	(248)	(183)	(202)
Net loss attributable to common stockholders	$ (5,144)	$ (7,956)	$ (5,679)	$ (4,462)
Net loss per share attributable to common stockholders, basic and diluted[(1)]	$ (3.19)	$ (4.93)	$ (3.52)	$ (2.76)
Weighted-average shares outstanding, basic and diluted[(1)]	1,614,851	1,614,851	1,614,851	1,614,903
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)[(1)]		$ (1.67)		$ (0.88)
Pro forma weighted-average shares outstanding, basic and diluted (unaudited)[(1)]		4,589,074		4,909,376

(1) See Note 1 to our financial statements included elsewhere in this prospectus for an explanation of the methods used to calculate the historical and pro forma net loss per share, basic and diluted, and the number of shares used in the computation of these per share amounts.

	As of September 30, 2014		
	Actual	Pro Forma[1]	Pro Forma As Adjusted[2][3]
		(unaudited) (in thousands)	
Balance Sheet Data:			
Cash	$ 39,207	$ 39,207	$ 85,068
Total assets	41,306	41,306	85,508
Working capital	27,411	27,646	74,343
Preferred stock warrant liabilities	235	—	—
Long-term debt, less current portion	5,455	5,455	5,455
Redeemable convertible preferred stock	49,801	—	—
Accumulated deficit	(31,631)	(31,631)	(31,631)
Total stockholders' (deficit) equity	(29,649)	20,387	65,425

(1) Pro forma amounts reflect (i) the conversion of all our outstanding shares of redeemable convertible preferred stock as of September 30, 2014 into an aggregate of 6,369,567 shares of our common stock, and the resultant reclassification of our redeemable convertible preferred stock to stockholders' deficit and (ii) the adjustment of our outstanding warrants to purchas redeemable convertible preferred stock into warrants to purchase 38,758 shares of our common stock, and the resultant reclassification of our preferred stock warrant liabilities to additional paid-in capital, a component of stockholders' deficit, all of which will occur in connection with the closing of this offering.

(2) Pro forma as adjusted amounts reflect (i) the pro forma conversion adjustments described in footnote (1) above, (ii) the sale of 3,600,000 shares of our common stock in this offering at the assumed initial public offering price of $13.00 per share, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, and (iii) the sale of $5.0 million of shares of our common stock at a price per share equal to the initial public offering price (or 384,615 shares based on the assumed initial public offering price of $13.00 per share) in the concurrent private placement, after deducting estimated placement agent fees and expenses payable by us. Because we have not entered into any definitive agreements with NEA related to the concurrent private placement, there can be no guarantee that the concurrent private placement will take place or that the terms of the concurrent private placement will be consistent with those assumed in this prospectus.

(3) A $1.00 increase (decrease) in the assumed initial public offering price of $13.00 per share would increase (decrease) each of cash, total assets, working capital and total stockholders' equity (deficit) by $3.3 million, assuming the number of shares offered by us as stated on the cover page of this prospectus remain unchanged and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, a one million share increase (decrease) in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase (decrease) each of cash, total assets, working capital and total stockholders' equity (deficit) by $12.1 million, assuming the assumed initial public offering price remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below together with all of the other information contained in this prospectus, including our financial statements and the related notes appearing at the end of this prospectus, before deciding to invest in our common stock. If any of the following risks actually occurs, our business, prospects, operating results and financial condition could suffer materially, the trading price of our common stock could decline and you could lose all or part of your investment. The risks and uncertainties described below are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently believe to be immaterial may also adversely affect our business.

Risks Related to our Financial Position and Need for Additional Capital

We have incurred losses from operations since our inception and anticipate that we will continue to incur substantial operating losses for the foreseeable future. We may never achieve or sustain profitability.

We are a clinical stage company with limited operating history. All of our product candidates, including our most advanced product candidate, TRC105, will require substantial additional development time and resources before we would be able to apply for or receive regulatory approvals and begin generating revenue from product sales. We have incurred losses from operations in each year since our inception, including net losses of $4.9 million and $7.7 million for fiscal years 2012 and 2013, respectively. In addition, for the nine months ended September 30, 2014, we incurred a net loss of $4.3 million. As of September 30, 2014, we had an accumulated deficit of $31.6 million.

We expect to continue to incur substantial and increased expenses as we expand our development activities and advance our clinical programs, particularly with respect to our planned clinical development for TRC105. We also expect an increase in our expenses associated with creating additional infrastructure to support operations as a public company. As a result of the foregoing, we expect to continue to incur significant and increasing losses and negative cash flows for the foreseeable future.

To become and remain profitable, we or our partners must succeed in developing our product candidates, obtaining regulatory approval for them, and manufacturing, marketing and selling those products for which we or our partners may obtain regulatory approval. We or they may not succeed in these activities, and we may never generate revenue from product sales that is significant enough to achieve profitability. Because of the numerous risks and uncertainties associated with pharmaceutical and biological product development, we are unable to predict the timing or amount of increased expenses or when, or if, we will be able to achieve profitability. In addition, our expenses could increase if we are required by the FDA or comparable foreign regulatory authorities to perform studies or trials in addition to those currently expected, or if there are any delays in completing our clinical trials or the development of any of our product candidates. Even if we achieve profitability in the future, we may not be able to sustain profitability in subsequent periods. Our failure to become or remain profitable would depress our market value and could impair our ability to raise capital, expand our business, develop other product candidates or continue our operations. A decline in the value of our company could cause you to lose all or part of your investment.

We will require substantial additional financing to achieve our goals, and failure to obtain additional financing when needed could force us to delay, limit, reduce or terminate our drug development efforts.

Developing pharmaceutical products, including conducting preclinical studies and clinical trials, is expensive. We expect our development expenses to substantially increase in connection with our ongoing activities, particularly as we advance our clinical programs, including our planned and future clinical trials of TRC105.

We estimate that we will receive net proceeds of approximately $40.4 million (or approximately $47.0 million if the underwriters exercise in full their option to purchase additional shares) from the sale of the shares of common stock offered by us in this offering, excluding any proceeds from the concurrent private placement, based on the assumed initial public offering price of $13.00 per share, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. We also expect to receive net proceeds of $4.6 million from the sale by us of shares of our common stock in the concurrent private placement, for an aggregate amount to be raised by us in this offering and the concurrent private placement of $45.0 million, based on the assumed initial public offering price of $13.00 per share, and after deducting the estimated placement agent fees and estimated offering expenses payable by us. Because we have not entered into any definitive agreements with NEA related to the concurrent private placement, there can be no guarantee that the concurrent private placement will take place or that the terms of the concurrent private placement will be consistent with those assumed in this prospectus. As of September 30, 2014, we had cash of $39.2 million. Based upon our current operating plan, we believe that the net proceeds from this offering, together with our existing cash, will enable us to fund our operating expenses and capital requirements for at least the next 18 months. Regardless of our expectations as to how long the net proceeds from this offering and the concurrent private placement will fund our operations, changing circumstances beyond our control may cause us to consume capital more rapidly than we currently anticipate. For example, our clinical trials may encounter technical, enrollment or other difficulties or we could encounter difficulties obtaining clinical trial material that could increase our development costs more than we expect. In any event, we will require additional capital prior to completing Phase 3 development of, filing for regulatory approval for, or commercializing, TRC105 or any of our other product candidates.

Attempting to secure additional financing may divert our management from our day-to-day activities, which may adversely affect our ability to develop our product candidates. In addition, we cannot guarantee that future financing will be available in sufficient amounts or on terms acceptable to us, if at all. If we are unable to raise additional capital when required or on acceptable terms, we may be required to significantly delay, scale back or discontinue the development or commercialization of our product candidates or otherwise significantly curtail, or cease, operations. If we are unable to pursue or forced to delay our planned drug development efforts due to lack of financing, it would have a material adverse effect on our business, operating results and prospects.

Raising additional capital may cause dilution to our existing stockholders, restrict our operations or require us to relinquish rights to our product candidates on unfavorable terms to us.

We may seek additional capital through a variety of means, including through private and public equity offerings and debt financings. To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest will be diluted, and the terms may include liquidation or other preferences that adversely affect your rights as a stockholder. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take certain actions, such as incurring additional debt, making

capital expenditures or declaring dividends. If we raise additional funds through licensing or collaboration arrangements with third parties, we may have to relinquish valuable rights to our product candidates, or grant licenses on terms that are not favorable to us.

Our loan and security agreement with SVB contains restrictions that limit our flexibility in operating our business. We may be required to make a prepayment or repay the outstanding indebtedness earlier than we expect if a prepayment event or an event of default occurs, including a material adverse change with respect to us, which could have a materially adverse effect on our business.

In November 2013, we entered into a loan and security agreement with SVB and borrowed $2.5 million under this credit facility. In June 2014, the agreement was amended to provide up to an additional $7.5 million in borrowing availability all of which was drawn prior to September 30, 2014. The agreement, as amended, contains various covenants that limit our ability to engage in specified types of transactions. These covenants limit our ability to, among other things:

- convey, sell, lease or otherwise dispose of certain parts of our business or property;
- change the nature of our business;
- liquidate or dissolve;
- enter into certain change in control or acquisition transactions;
- incur or assume certain debt;
- grant certain types of liens on our assets;
- maintain certain collateral accounts;
- pay dividends or make certain distributions to our stockholders;
- make certain investments;
- enter into material transactions with affiliates;
- make or permit certain payments on subordinate debt; and
- become an "investment company" as defined under the Investment Company Act of 1940, as amended.

The restrictive covenants of the agreement could cause us to be unable to pursue business opportunities that we or our stockholders may consider beneficial.

A breach of any of these covenants could result in an event of default under the agreement. An event of default will also occur if, among other things, a material adverse change in our business, operations or condition occurs, which could potentially include negative results in clinical trials, or a material impairment of the prospect of our repayment of any portion of the amounts we owe under the agreement occurs. In the case of a continuing event of default under the agreement, SVB could elect to declare all amounts outstanding to be immediately due and payable, proceed against the collateral in which we granted SVB a security interest under the agreement, or otherwise exercise the rights of a secured creditor. Amounts outstanding under the agreement are secured by all of our existing and future assets, excluding intellectual property, which is subject to a negative pledge arrangement.

Risks Related to Clinical Development and Regulatory Approval of Our Product Candidates

We are heavily dependent on the success of our lead product candidate TRC105, which is in a later stage of development than our other product candidates. We cannot give any assurance that TRC105 will successfully complete clinical development or receive regulatory approval, which is necessary before it can be commercialized.

Our business and future success is substantially dependent on our ability to successfully develop, obtain regulatory approval for, and commercialize our lead product candidate TRC105, which is currently in Phase 2 clinical trials for the treatment of multiple solid tumor types. Any delay or setback in the development of any of our product candidates, particularly TRC105, could adversely affect our business and cause our stock price to decline. We cannot assure you that our planned clinical development for TRC105 will be completed in a timely manner, or at all, or that we or our partner Santen or any additional future partners, will be able to obtain approval for TRC105 from the FDA or any foreign regulatory authority.

Clinical development is a lengthy and expensive process with an uncertain outcome, and results of earlier studies and trials may not be predictive of future trial results. Failure can occur at any stage of clinical development.

Clinical development 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. For example, enrollment was closed for two of our Phase 2 clinical trials sponsored by NCI following interim analyses that did not meet the requirements for continuing enrollment. The results of preclinical studies and early clinical trials of our product candidates may not be predictive of the results of subsequent clinical trials. In particular, the positive results observed in the Phase 1 and 2 clinical trials of TRC105 do not ensure that the ongoing or planned clinical trials of TRC105 will demonstrate similar results. In addition, further interim results or the final results from these trials could be negative.

Even if our product candidates demonstrate favorable results in ongoing or planned Phase 1 and 2 clinical trials, many product candidates fail to show desired safety and efficacy traits in late-stage clinical trials despite having progressed through earlier trials. In addition to the inherent safety and efficacy traits of our product candidates, clinical trial failures may result from a multitude of factors including flaws in trial design, manufacture of clinical trial material, dose selection and patient enrollment criteria. 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. Based upon negative or inconclusive results, we or our partners may decide, or regulators may require us, to conduct additional clinical trials or preclinical studies. In addition, data obtained from trials and studies are susceptible to varying interpretations, and regulators may not interpret our data as favorably as we do, which may delay, limit or prevent regulatory approval.

If TRC105 or any other product candidate is found to be unsafe or lack efficacy, we will not be able to obtain regulatory approval for it and our business would be materially harmed. For example, if the results of ongoing or planned Phase 1 and 2 clinical trials of TRC105 demonstrate unexpected safety issues or do not achieve the primary efficacy endpoints, as applicable, the prospects for approval of TRC105 as well our stock price would be materially and adversely affected.

Delays in clinical trials are common and have many causes, and any delay could result in increased costs to us and jeopardize or delay our ability to obtain regulatory approval and commence product sales.

We may experience delays in clinical trials of our product candidates. Our ongoing and planned clinical trials may not begin on time, have an effective design, enroll a sufficient number of patients or be completed on schedule, if at all. Our clinical trials can be delayed for a variety of reasons, including:

- inability to raise funding necessary to initiate or continue a trial;
- delays in obtaining regulatory approval to commence a trial;
- delays in reaching agreement with the FDA on final trial design;
- adverse findings in toxicology studies, including chronic toxicology studies;
- imposition of a clinical hold for safety reasons or following an inspection of our clinical trial operations or trial sites by the FDA or other regulatory authorities;
- delays in reaching agreement on acceptable terms with prospective clinical trial sites;
- delays in obtaining required institutional review board approval at each site;
- delays in recruiting suitable patients to participate in a trial;
- delays in having patients complete participation in a trial or return for post-treatment follow-up;
- clinical sites dropping out of a trial to the detriment of enrollment;
- time required to add new clinical sites; or
- delays by our contract manufacturers or other third parties to produce and deliver sufficient supply of clinical trial materials.

If initiation or completion of our ongoing or planned clinical trials are delayed for any of the above reasons or other reasons, our development costs may increase, our approval process could be delayed and our ability to commercialize our product candidates could be materially harmed, which could have a material adverse effect on our business.

Our product candidates may cause adverse events or have other properties that could delay or prevent their regulatory approval or limit the scope of any approved label or market acceptance.

Adverse events, or AEs, caused by our product candidates or other potentially harmful characteristics of our product candidates could cause us, our partners, including NCI or other third party clinical trial sponsors, clinical trial sites or regulatory authorities to interrupt, delay or halt clinical trials and could result in the denial of regulatory approval.

Phase 1 or Phase 2 clinical trials of TRC105 and TRC102 conducted to date have generated AEs related to the study drug, some of which have been serious. The most common AEs identified to date and related to TRC105 have been anemia, dilated small vessels in the skin and mucosal membranes (which may result in nosebleeds and bleeding of the gums), headache, fatigue and gastrointestinal and other symptoms during the initial infusion of TRC105. The most common AE identified in our clinical trials of TRC102 has been anemia. While we have not observed an exacerbation of side effects commonly associated with VEGF inhibitors in clinical trials of TRC105 in combination with a VEGF inhibitor, it is possible that future trials, including larger and lengthier Phase 3 clinical trials, may show this effect due to both drugs acting to inhibit angiogenesis simultaneously. Because our development and regulatory approval strategy

for TRC105 is focused on combining TRC105 with VEGF inhibitors, if we encountered safety issues associated with combining TRC105 with VEGF inhibitors, it would be a significant setback for our development program and our ability to obtain regulatory approval for TRC105 may be adversely impacted.

Further, if any of our approved products cause serious or unexpected side effects after receiving market approval, a number of potentially significant negative consequences could result, including:

- regulatory authorities may withdraw their approval of the product or impose restrictions on its distribution;
- regulatory authorities may require the addition of labeling statements, such as warnings or contraindications;
- we may be required to change the way the product is administered or conduct additional clinical trials;
- we could be sued and held liable for harm caused to patients; or
- our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of the affected product candidate and could substantially increase the costs of commercializing our product candidates.

The regulatory approval processes of the FDA and comparable foreign authorities are lengthy, time consuming and inherently unpredictable, and if we are ultimately unable to obtain regulatory approval for our product candidates, our business will be substantially harmed.

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. For example, we cannot guarantee that for certain oncology indications where the FDA has traditionally granted approval to therapies that can demonstrate progression-free survival, the agency will not later require us to demonstrate overall survival, which would greatly extend the time and increase the capital required to complete clinical development. We have not obtained regulatory approval for any product candidate, and it is possible that none of our existing product candidates or any product candidates we may seek to develop in the future will ever obtain regulatory approval.

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, scope 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 Biologics License Application, or BLA, or a New Drug Application, or NDA, 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;
- the FDA or comparable foreign regulatory authorities may fail to approve our validation methods for detecting TRC105 serum levels and antibodies to TRC105 and assessing TRC105 activity in a biologic release assay; and
- the approval policies or regulations of the FDA or comparable foreign regulatory authorities may change significantly 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 TRC105 or our other product candidates, which would harm our business, results of operations and prospects significantly.

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 harm the commercial prospects for our product candidates. For example, we anticipate that if we were to obtain regulatory approval for TRC105 in some or all of the initial oncology indications we are pursuing, we or our partners such as NCI would still need to conduct additional Phase 3 clinical trials in order to obtain approval for additional indications and expand TRC105's market potential.

We have not previously submitted a BLA or an NDA or any similar drug approval filing to the FDA or any comparable foreign authority for any product candidate, and we cannot be certain that any of our product candidates will be successful in clinical trials or receive regulatory approval. Further, our product candidates may not receive regulatory approval even if they are successful in clinical trials. If we do not receive regulatory approvals for our product candidates, we may not be able to continue our operations. Even if we successfully obtain regulatory approvals to market one or more of our product candidates, our revenue will be dependent, to a significant extent, upon the size of the markets in the territories for which we gain regulatory approval. If the markets for patients or indications that we are targeting are not as significant as we estimate, we may not generate significant revenue from sales of such products, if approved.

We may not receive Fast Track designation for our product candidates from the FDA, or Fast Track designation may not actually lead to a faster development or regulatory review or approval process.

We intend to seek Fast Track designation for our eligible product candidates. Fast track designation provides increased opportunities for sponsor meetings with the FDA during preclinical and clinical development, in addition to the potential for rolling review once a marketing application is filed. A new drug or biologic is eligible for Fast Track designation if it is intended to treat a serious or life-threatening disease or condition and the drug demonstrates the potential to address unmet medical needs for the disease or condition. The FDA has broad discretion whether or not to grant this designation, and even if we believe a particular product candidate is eligible for this designation, we cannot assure you that the FDA will grant it. Even if our product candidates receive Fast Track designation, we may not experience a faster development process, review or approval compared to conventional FDA procedures. The FDA may withdraw Fast Track designation if it believes that the designation is no longer supported by data from our clinical development program.

We may be unsuccessful in our anticipated efforts to obtain orphan drug designation from the FDA for TRC105 for the treatment of soft tissue sarcoma and glioblastoma and for TRC102 for the treatment of glioblastoma and mesothelioma, and if we are unable to obtain orphan drug designation our regulatory and commercial prospects may be negatively impacted.

The FDA grants orphan designation to drugs that are intended to treat rare diseases with fewer than 200,000 patients in the United States or that affect more than 200,000 persons but are not expected to recover the costs of developing and marketing a treatment drug. Orphan drugs do not require prescription drug user fees with a marketing application, may qualify the drug development sponsor for certain tax credits, and may be eligible for a market exclusivity period of seven years. We cannot guarantee that we will be able to receive orphan drug status from the FDA for any of our product candidates. If we are unable to secure orphan drug designation, our regulatory and commercial prospects may be negatively impacted.

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 studies or trials 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 would intend to charge for our products is also subject to approval.

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 will require surveillance to monitor the safety and efficacy of the product candidate. The FDA may also require a Risk Evaluation and Mitigation Strategy, or REMS, in order to approve our product candidates, which could entail 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, AE 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, establishment registration and drug listing, as well as continued compliance with regulatory requirements for current good manufacturing practices, or cGMPs, and current good clinical practices, or cGCPs, 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 existing 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.

Risks Related to Our Reliance on Third Parties

We depend in part on NCI to advance clinical development of TRC105 and TRC102 and also depend in part on Case Western to advance clinical development of TRC102.

NCI is currently sponsoring and funding two ongoing clinical trials involving TRC105 and one clinical trial involving TRC102, and we expect NCI to sponsor three additional clinical trials involving TRC102. In addition, Case Western is sponsoring and funding two separate clinical

trials involving TRC102. The advancement of our product candidates depends in part on the continued sponsorship and funding of clinical trials by these organizations, as our resources and capital would not be sufficient to conduct these trials on our own. Neither NCI nor Case Western are obligated to continue sponsorship or funding of any clinical trials involving our product candidates and could stop their support at any time. If NCI or Case Western ceased their support for our product candidates, our ability to advance clinical development of our product candidates could be limited and we may not be able to pursue the number of different indications for our product candidates that are currently being pursued.

Even if NCI and Case Western continue to sponsor and fund clinical trials of our product candidates, our reliance on their support subjects us to numerous risks. For example, we have limited control over the design or timing of their clinical trials and limited visibility into their day-to-day activities, including with respect to how they are providing and administering our product candidates. If there is a failure in a clinical trial sponsored by NCI or Case Western due to poor design of the trial, errors in the way the clinical trial is executed or any other reason, or if NCI or Case Western fails to comply with applicable regulatory requirements, it could represent a major set-back for the development and approval of our product candidates, even if we were not directly involved in the trial and even if the clinical trial failure was not related to the underlying safety or efficacy of the product candidate. In addition, NCI or Case Western could decide to de-prioritize clinical development of our product candidates in relation to other projects, which could adversely affect the timing of further clinical development. We are also subject to various confidentiality obligations with respect to the clinical trials sponsored by NCI and Case Western, which could prevent us from disclosing current information about the progress or results from these trials until NCI and Case Western, as applicable, publicly disclose such information or permit us to do so. This may make it more difficult to evaluate our business and prospects at any given point in time and could also impair our ability to raise capital on our desired timelines.

We are dependent on our license agreement with Santen to develop and commercialize our anti-endoglin antibodies, including DE-122, in the field of ophthalmology. The failure to maintain our agreement with Santen or the failure of Santen to perform its obligations under the agreement, could negatively impact our business.

Pursuant to the terms of our license agreement with Santen, we granted Santen an exclusive, worldwide license to certain patents, information and know-how related to our anti-endoglin antibodies, including TRC105, which is referred to by Santen as DE-122, for development and commercialization in ophthalmology indications, excluding systemic treatment of ocular tumors. Consequently, our ability to realize value or generate any revenues from our anti-endoglin antibodies in the field of ophthalmology depends on Santen's willingness and ability to develop and obtain regulatory approvals for and successfully commercialize product candidates using our technology for these indications. We have limited control over the amount and timing of resources that Santen will dedicate to these efforts. In particular, we will not be entitled to receive additional milestone or royalty payments from Santen absent further development and eventual commercialization of anti-endoglin antibodies in ophthalmology indications.

We are subject to a number of other risks associated with our dependence on our license agreement with Santen, including:

- Santen may not comply with applicable regulatory requirements with respect to developing or commercializing products under the license agreement, which could adversely impact development, regulatory approval and eventual commercialization of such products;

- we and Santen could disagree as to future development plans and Santen may delay initiation of clinical trials or stop a future clinical trial;

- there may be disputes between us and Santen, including disagreements regarding the terms of the license agreement, that may result in the delay of or failure to achieve development, regulatory and commercial objectives that would result in milestone or royalty payments to us, the delay or termination of any future development or commercialization of anti-endoglin antibodies using our technology in the field of ophthalmology, and/or costly litigation or arbitration that diverts our management's attention and resources;

- Santen may not provide us with timely and accurate information regarding development progress and activities under the license agreement, which could adversely impact our ability to report progress to our investors and otherwise plan our own development of our anti-endoglin antibodies, including TRC105, in non-ophthalmology indications;

- business combinations or significant changes in Santen's business strategy may adversely affect Santen's ability or willingness to perform its obligations under the license agreement;

- Santen may not properly maintain or defend our intellectual property rights in the field of ophthalmology or may use our proprietary information in such a way as to invite litigation that could jeopardize or invalidate our intellectual property rights or expose us to potential litigation; and

- the royalties we are eligible to receive from Santen may be reduced or eliminated based upon Santen's and our ability to maintain or defend our intellectual property rights.

The license agreement is subject to early termination, including through Santen's right to terminate without cause upon advance notice to us. If the agreement is terminated early, we may not be able to find another collaborator for the commercialization and further development of our anti-endoglin antibodies for ophthalmology indications on acceptable terms, or at all, and we may otherwise be unable to pursue continued development on our own for these indications.

To the extent we enter into additional agreements for the development and commercialization of our product candidates we would likely be similarly dependent on the performance of those third parties and subject to similar risks.

We may not be successful in establishing and maintaining additional collaborations, which could adversely affect our ability to develop and commercialize our product candidates.

A part of our strategy is to strategically evaluate and, as deemed appropriate, enter into additional out-licensing and collaboration agreements, including potentially with major biotechnology or pharmaceutical companies. We face significant competition in seeking appropriate partners for our product candidates, and the negotiation process is time-consuming and complex. In order for us to successfully partner our product candidates, potential partners must view these product candidates as having the requisite potential to demonstrate safety and efficacy and as being economically valuable in light of the terms that we are seeking and other available products for licensing by other companies. Due to our existing license agreement with Santen, we may find it more difficult to secure additional collaborations for our anti-endoglin antibodies if major biotechnology or pharmaceutical companies would prefer to have exclusive control over development for all indications. Even if we are successful in our efforts to establish new collaborations, the terms that we agree upon may not be favorable to us, and we may not be able to maintain such collaborations if, for example, development or approval of a product candidate is delayed or sales of an approved product are disappointing. Any inability or delay in entering into new collaboration agreements related to our product candidates, in particular in foreign countries where we do not have and do not intend to establish significant capabilities,

could delay the development and commercialization of our product candidates and reduce their market potential.

We rely on third parties to conduct preclinical studies and clinical trials of our product candidates, and if they do not properly and successfully perform their obligations to us, we may not be able to obtain regulatory approvals for our product candidates.

While we intend to continue designing, monitoring and managing our Phase 1 and Phase 2 clinical trials of our product candidates using our clinical operations and regulatory team, we still depend upon independent investigators and collaborators, such as universities and medical institutions, to conduct our clinical trials at their sites under agreements with us. In addition, we expect that we will need to rely on third party contract research organizations, or CROs, to assist in monitoring, managing and otherwise carrying out any Phase 3 clinical trials that we sponsor at sites outside the United States. We will compete with many other companies for the resources of these third party CROs, and the initiation and completion of our Phase 3 clinical trials may be delayed if we encounter difficulties in engaging CROs or need to change CROs during a trial.

We control only certain aspects of the activities conducted for us by the third parties on which we currently rely and on which we will rely in the future for our clinical trials. Nevertheless, we are responsible for ensuring that each of our clinical trials is conducted in accordance with 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 cGCPs, which are regulations and guidelines enforced by the FDA and comparable foreign regulatory authorities for product candidates in clinical development. Regulatory authorities enforce these cGCPs through periodic inspections of trial sponsors, principal investigators and trial sites. If we or any of these third parties fail to comply with applicable cGCP 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 cGCP regulations. In addition, our clinical trials must be conducted with product candidates produced under cGMPs 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 health care laws, including, among others, fraud and abuse, false claims, privacy and security, and physician payment transparency laws. Any third parties conducting our clinical trials are not and will not be 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 clinical development programs. These third parties may also have relationships with other commercial entities, including our competitors, for whom they may also be conducting clinical trials 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 may occur, which can materially impact our ability to meet our desired clinical development timelines.

We intend to rely on third-party manufacturers to make our product candidates, and any failure by a third-party manufacturer may delay or impair our ability to complete clinical trials or commercialize our product candidates.

Manufacturing drugs and biologics is complicated and is tightly regulated by regulatory authorities, including the FDA and foreign equivalents. We currently rely on third party manufacturers to supply us, as well as other parties conducting studies and trials of our product candidates, such as NCI, Case Western and Santen, with drug substance for preclinical and Phase 1 and Phase 2 clinical trials. We also expect to continue to rely on third party manufacturers for any drug substance required for Phase 3 clinical trials and for commercial supply, and do not intend to build our own manufacturing capability. Moreover, the market for contract manufacturing services for drug products, especially biologics such as TRC105, is highly cyclical, with periods of relatively abundant capacity alternating with periods in which there is little available capacity. If any need we have for contract manufacturing services increases during a period of industry-wide tight capacity, we may not be able to access the required capacity on a timely basis or on commercially viable terms. In addition, we contract with fill and finishing providers with the appropriate expertise, facilities and scale to meet our needs.

Successfully transferring complicated manufacturing techniques to contract manufacturing organizations and scaling up these techniques for commercial quantities is time consuming and subject to potential difficulties and delays. For example, we rely on Lonza Sales AG, or Lonza, to manufacture TRC105 drug substance for our Phase 1 and Phase 2 clinical trials and separately license from Lonza its proprietary cell line and other methods of producing TRC105 drug substance. While we have the right to transfer the manufacture of TRC105 drug substance to additional or alternate suppliers and to sublicense Lonza's TRC105 manufacturing technology to such other suppliers, we may encounter delays in any such transfer due to the time and effort required for another party to understand and successfully implement Lonza's proprietary process. The drug substances for our product candidates have also never been produced at commercial scale. In particular for biologics, it is not uncommon to experience setbacks and delays in scaling up production in a reliable and contamination-free manner, which may delay our ability to obtain regulatory approval or may result in higher costs to manufacture commercial drug product than we currently expect.

The facilities used by our current or future third party manufacturers to manufacture our product candidates must be approved by the FDA pursuant to inspections that will be conducted after we submit a BLA or an NDA to the FDA. While we work closely with our third party manufacturers on the manufacturing process for our product candidates, we generally do not control the implementation of the manufacturing process of, and are completely dependent on, our third party manufacturers for compliance with cGMP regulatory requirements and for manufacture of both drug substances and finished drug products. If our third party manufacturers cannot successfully manufacture material that conforms to applicable specifications and the strict regulatory requirements of the FDA or other regulatory authorities, they will not be able to secure or maintain regulatory approval for their manufacturing facilities. In addition, we have no control over the ability of our contract manufacturers or other third party 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 commercialize our product candidates.

Risks Related to Our Intellectual Property

If we are unable to obtain or protect intellectual property rights related to our product candidates, we may not be able to compete effectively.

We rely upon a combination of patents, trade secret protection and confidentiality agreements to protect the intellectual property related to our product candidates. If we do not adequately protect our intellectual property, competitors may be able to use our technologies which could do harm to our business and affect our ability to be profitable. In particular, our success depends in large part on our ability to obtain and maintain patent protection in the United States and other countries with respect to our product candidates. Additionally, we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. The patent applications that we own or in-license may fail to result in issued patents with claims that cover our product candidates in the United States or in other countries. We may also fail to identify patentable aspects of our research and development before it is too late to obtain patent protection. Any disclosure or misappropriation by third parties of our confidential proprietary information could enable competitors to quickly duplicate or surpass our technological achievements, eroding our competitive position in our market.

The patent position of biotechnology companies is generally uncertain because it involves complex legal and factual considerations in a legal framework that is constantly evolving. The standards applied by the United States Patent and Trademark Office, or USPTO, and foreign patent offices in granting patents are not always applied uniformly or predictably. For example, there is no uniform worldwide policy regarding patentable subject matter or the scope of claims allowable in biotechnology patents. There is a substantial amount of prior art in the biotechnology and pharmaceutical fields, including scientific publications, patents and patent applications. There is no assurance that all potentially relevant prior art relating to our patents and patent applications has been found. We may be unaware of prior art that could be used to invalidate an issued patent or prevent our pending patent applications from issuing as patents. Even if patents do successfully issue and even if such patents cover our product candidates, third parties may challenge their validity, enforceability or scope, which may result in such patents being narrowed or invalidated. Furthermore, even if they are unchallenged, our patents and patent applications may not adequately protect our intellectual property, provide exclusivity for our product candidates or prevent others from designing around our claims. Any of these outcomes could impair our ability to prevent competition from third parties, which may have an adverse impact on our business.

If patent applications we hold or have in-licensed with respect to our product candidates fail to issue, if their breadth or strength of protection is threatened, or if they fail to provide meaningful exclusivity for our product candidates, it could dissuade companies from collaborating with us. Several patent applications covering our product candidates have been filed recently. We cannot offer any assurances about which, if any, patents will issue, the breadth of any such patents or whether any issued patents will be found invalid and unenforceable or will be threatened by third parties. Any successful challenge to these patents or any other patents owned by or licensed to us could deprive us of rights necessary for the successful commercialization of any product candidate that we may develop. Since patent applications in the United States and most other countries are confidential for a period of time after filing, and some remain so until issued, we cannot be certain that we were the first to file any patent application related to a product candidate.

For applications filed before March 16, 2013, or patents issuing from such applications, an interference proceeding can be provoked by a third party, or instituted by the USPTO to determine who was the first to invent any of the subject matter covered by the claims of our applications and patents. As of March 16, 2013, the United States transitioned to a "first-to-file" system for deciding which party should be granted a patent when two or more patent applications are filed by different parties claiming the same invention. A third party that files a patent application in the USPTO before us could therefore be awarded a patent covering an invention of ours even if we had made the invention before it was made by the third party. The change to "first-to-file" from "first-to-invent" is one of the changes to the patent laws of the United States resulting from the Leahy-Smith America Invents Act, or the Leahy-Smith Act, signed into law on September 16, 2011. Among some of the other significant changes to the patent laws are changes that limit where a patentee may file a patent infringement suit and provide opportunities for third parties to challenge any issued patent in the USPTO. It is not yet 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, all of which could have a material adverse effect on our business and financial condition.

Patents granted by the European Patent Office may be opposed by any person within nine months from the publication of their grant and, in addition, may be challenged before national courts at any time. Furthermore, even if they are unchallenged, our patents and patent applications may not adequately protect our intellectual property or prevent others from designing around our claims. Furthermore, due to the patent laws of a country, or the decisions of a patent examiner in a country, or our own filing strategies, we may not obtain patent coverage for all our product candidates or methods involving these product candidates in the parent patent application.

In addition, patents have a limited lifespan. In the United States, the natural expiration of a patent is generally 20 years after it is filed. Various extensions may be available; however, the life of a patent and the protection it affords is limited. If we encounter delays in obtaining regulatory approvals, the period of time during which we could market a product candidate under patent protection could be reduced. Even if patents covering our product candidates are obtained, once the patent life has expired for a product, we may be open to competition from generic and biosimilar products.

Any loss of patent protection could have a material adverse impact on our business. We may be unable to prevent competitors from entering the market with a product that is similar to or the same as our products.

We depend on our licensors to prosecute and maintain patents and patent applications that are material to our business. Any failure by our licensors to effectively protect these intellectual property rights could adversely impact our business and operations.

As of September 30, 2014, we are the exclusive licensee of nine issued U.S. patents and one pending U.S. patent application and three issued non-U.S patents and ten pending non-U.S. patent applications relating to "Anti-Endoglin Monoclonal Antibodies and their use in Antiangiogenic Therapy," "Method For Increasing the Efficacy of Anti-Tumor Agents by Anti-Endoglin Antibody," "Methoxyamine Potentiation of Temozolomide Anti-Cancer Activity," "Methoxyamine Combinations in the Treatment of Cancer," "Alkylating Agent Combinations in the Treatment of Cancer" and "Combination Therapy of Cancer with Anti-Endoglin Antibodies and Anti-VEGF Agents."

As a licensee of third parties, we rely on these third parties to file and prosecute patent applications and maintain patents and otherwise protect the licensed intellectual property under

some of our license agreements. We have not had and do not have primary control over these activities for certain of our patents or patent applications and other intellectual property rights. We cannot be certain that such activities by third parties have been or will be conducted in compliance with applicable laws and regulations or will result in valid and enforceable patents or other intellectual property rights. Pursuant to the terms of the license agreements with some of our licensors, the licensors may have the right to control enforcement of our licensed patents or defense of any claims asserting the invalidity of these patents and even if we are permitted to pursue such enforcement or defense, we will require the cooperation of our licensors. We cannot be certain that our licensors will allocate sufficient resources or prioritize their or our enforcement of such patents or defense of such claims to protect our interests in the licensed patents. Even if we are not a party to these legal actions, an adverse outcome could harm our business because it might prevent us from continuing to license intellectual property that we may need to operate our business.

Third-party claims of intellectual property infringement or misappropriation may prevent or delay our development and commercialization efforts.

Our commercial success depends in part on us and our partners not infringing the patents and proprietary rights of third parties. There is a substantial amount of litigation and other proceedings, both within and outside the United States, involving patent and other intellectual property rights in the biotechnology and pharmaceutical industries, including patent infringement lawsuits, interferences, oppositions, reexamination and review proceedings before the USPTO and corresponding foreign patent offices. Numerous U.S. and foreign issued patents and pending patent applications owned by third parties exist in the fields in which we and our partners are developing and may develop our product candidates. As the biotechnology and pharmaceutical industries expand and more patents are issued, the risk increases that our product candidates may be subject to claims of infringement of the patent rights of third parties.

Third parties may assert that we are employing their proprietary technology without authorization. There may be third-party patents or patent applications with claims to materials, formulations, methods of manufacture or methods for treatment related to the use or manufacture of our product candidates, that we failed to identify. For example, applications filed before November 29, 2000 and certain applications filed after that date that will not be filed outside the United States remain confidential until issued as patents. Except for the preceding exceptions, patent applications in the United States and elsewhere are generally published only after a waiting period of approximately 18 months after the earliest filing. Therefore, patent applications covering our product candidates or methods of use of our product candidates could have been filed by others without our knowledge. Additionally, pending patent applications which have been published can, subject to certain limitations, be later amended in a manner that could cover our product candidates or the use or manufacture of our product candidates.

The coverage of patents is subject to interpretation by the courts, and the interpretation is not always uniform. If we are sued for patent infringement, we would need to demonstrate that our product candidates, products or methods either do not infringe the patent claims of the relevant patent or that the patent claims are invalid, and we may not be able to do this. Proving that a patent is invalid is difficult. For example, in the United States, proving invalidity requires a showing of clear and convincing evidence to overcome the presumption of validity enjoyed by issued patents. Also, in proceedings before courts in Europe, the burden of proving invalidity of the patent usually rests on the party alleging invalidity. Third parties could bring claims against us that would cause us to incur substantial expenses and, if successful against us, could cause us to pay substantial damages. Further, if a patent infringement suit were brought against us, we could be forced to stop or delay research, development, manufacturing or sales of the product or product candidate that is the subject of the suit.

If any third-party patents were held by a court of competent jurisdiction to cover aspects of our materials, formulations, methods of manufacture or methods for treatment, the holders of any such patents would be able to block our ability to develop and commercialize the applicable product candidate until such patent expired or unless we or our partner obtain a license. These licenses may not be available on acceptable terms, if at all. Even if we or our partner were able to obtain a license, the rights may be nonexclusive, which could result in our competitors gaining access to the same intellectual property. Ultimately, we or our partner could be prevented from commercializing a product, or be forced to cease some aspect of our business operations, if, as a result of actual or threatened patent infringement claims, we or our partner are unable to enter into licenses on acceptable terms.

Parties making claims against us or our partner may obtain injunctive or other equitable relief, which could effectively block our or our partner's ability to further develop and commercialize one or more of our product candidates. Defending against claims of patent infringement or misappropriation of trade secrets could be costly and time consuming, regardless of the outcome. Thus, even if we were to ultimately prevail, or to settle at an early stage, such litigation could burden us with substantial unanticipated costs. In addition, litigation or threatened litigation could result in significant demands on the time and attention of our management team, distracting them from the pursuit of other company business. In the event of a successful claim of infringement against us, we may have to pay substantial damages, including treble damages and attorneys' fees for willful infringement, pay royalties, redesign our infringing products or obtain one or more licenses from third parties, which may be impossible or require substantial time and monetary expenditure.

Third parties may submit applications for patent term extensions in the United States and/or supplementary protection certificates in the European Union member states seeking to extend certain patent protection which, if approved, may interfere with or delay the launch of one or more of our products.

We may face a claim of misappropriation if a third party believes that we inappropriately obtained and used trade secrets of such third party. If we are found to have misappropriated a third party's trade secrets, we may be prevented from further using such trade secrets, limiting our ability to develop our product candidates, and we may be required to pay damages.

During the course of any patent or other intellectual property litigation, there could be public announcements of the results of hearings, rulings on motions, and other interim proceedings in the litigation. If securities analysts or investors regard these announcements as negative, the perceived value of our product candidates or intellectual property could be diminished. Accordingly, the market price of our common stock may decline.

We may become involved in lawsuits to protect or enforce our inventions, patents or other intellectual property or the patent of our licensors, which could be expensive and time consuming.

Competitors may infringe our intellectual property, including our patents or the patents of our licensors. In addition, one or more of our third party collaborators may have submitted, or may in the future submit, a patent application to the USPTO without naming a lawful inventor that developed the subject matter in whole or in part while under an obligation to execute an assignment of rights to us. As a result, we may be required to file infringement or inventorship claims to stop third party infringement, unauthorized use, or to correct inventorship. This can be expensive, particularly for a company of our size, and time-consuming. Any claims that we assert against perceived infringers could also provoke these parties to assert counterclaims against us alleging that we infringe their intellectual property rights. In addition, in an infringement proceeding, a court may decide that a patent of ours is not valid or is

unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our patent claims do not cover its technology or that the factors necessary to grant an injunction against an infringer are not satisfied.

An adverse determination of any litigation or other proceedings could put one or more of our patents at risk of being invalidated, held unenforceable or interpreted narrowly and could put our patent applications at risk of not issuing.

Interference, derivation or other proceedings brought at the USPTO or any foreign patent authority may be necessary to determine the priority or patentability of inventions with respect to our patent applications or those of our licensors or collaborators. Litigation or USPTO proceedings brought by us may fail. An unfavorable outcome in any such proceedings could require us to cease using the related technology or to attempt to license rights to it from the prevailing party, or could cause us to lose valuable intellectual property rights. Our business could be harmed if the prevailing party does not offer us a license on commercially reasonable terms, if any license is offered at all. Even if we are successful, domestic or foreign litigation or USPTO or foreign patent office proceedings may result in substantial costs and distraction to our management. We may not be able, alone or with our licensors or collaborators, to prevent misappropriation of our trade secrets, confidential information or proprietary rights, particularly in countries where the laws may not protect such rights as fully as in the United States.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation or other proceedings, there is a risk that some of our confidential information could be compromised by disclosure during this type of litigation or proceedings. In addition, during the course of this kind of litigation or proceedings, there could be public announcements of the results of hearings, motions or other interim proceedings or developments or public access to related documents. If investors perceive these results to be negative, the market price for our common stock could be significantly harmed.

We have in-licensed a portion of our intellectual property, and, if we fail to comply with our obligations under these arrangements, we could lose such intellectual property rights or owe damages to the licensor of such intellectual property.

We are a party to a number of license agreements that are important to our business, and we may enter into additional license agreements in the future. Our product candidate TRC105 is protected by patents exclusively in-licensed from Roswell Park Cancer Institute. Our product candidate TRC102 is protected by patents exclusively licensed from Case Western. See "Business—Collaboration and License Agreements" for a description of our license agreements with Roswell Park Cancer Institute and Case Western.

Our existing license agreements impose, and we expect that future license agreements will impose, various diligence, milestone payment, royalty and other obligations on us. If there is any conflict, dispute, disagreement or issue of non-performance between us and our licensing partners regarding our rights or obligations under the license agreements, including any such conflict, dispute or disagreement arising from our failure to satisfy payment obligations under any such agreement, we may owe damages, our licensor may have a right to terminate the affected license, and our and our partner's ability to utilize the affected intellectual property in our drug development efforts, and our ability to enter into collaboration or marketing agreements for a product candidate, may be adversely affected.

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

Filing, prosecuting and defending patents on product candidates in all countries throughout the world would be prohibitively expensive, and our intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In

addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States and in some cases may even force us to grant a compulsory license to competitors or other third parties. Consequently, we may not be able to prevent third parties from practicing our inventions in all countries outside the United States, or from selling or importing products made using our 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 further, may export otherwise infringing products to territories where we have patent protection, but enforcement is not as strong as that in the United States. These products may compete with our products and our patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in 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 patents or marketing of competing products in violation of our proprietary rights generally. Proceedings to enforce our patent rights in foreign jurisdictions could result in substantial costs and divert our efforts and attention from other aspects of our business, could put our patents at risk of being invalidated or interpreted narrowly and our patent applications at risk of not issuing and could provoke third parties to assert claims against us. We may not prevail in any lawsuits that we initiate and the damages or other remedies awarded, if any, may not be commercially meaningful. Accordingly, our efforts to enforce our intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we develop or license.

In addition, our ability to protect and enforce our intellectual property rights may be adversely affected by unforeseen changes in domestic and foreign intellectual property laws.

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

Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents and applications will be due to be paid to the USPTO and various governmental patent agencies outside of the United States in several stages over the lifetime of the patents and applications. The USPTO and various non-U.S. governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. In many cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules. However, 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. In such an event, our competitors might be able to use our technologies and this circumstance would have a material adverse effect on our business.

Confidentiality agreements with employees and third parties may not prevent unauthorized disclosure of trade secrets and other proprietary information.

In addition to the protection afforded by patents, we rely on trade secret protection and confidentiality agreements to protect proprietary know-how that is not patentable or that we elect not to patent, processes for which patents are difficult to enforce and any other elements of our development processes that involve proprietary know-how or information that is not covered

by patents. However, trade secrets can be difficult to protect. We seek to protect our proprietary processes, in part, by entering into confidentiality agreements with our employees, consultants, and outside scientific advisors, contractors and collaborators. Although we use reasonable efforts to protect our trade secrets, our employees, consultants, contractors, or outside scientific advisors might intentionally or inadvertently disclose our trade secret information to competitors. In addition, competitors may otherwise gain access to our trade secrets or independently develop substantially equivalent information and techniques.

Enforcing a claim that a third party illegally obtained and is using any of our trade secrets is expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States sometimes are less willing than U.S. courts to protect trade secrets. Misappropriation or unauthorized disclosure of our trade secrets could impair our competitive position and may have a material adverse effect on our business.

Risks Related to Commercialization of Our Product Candidates

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

The use of anti-endoglin antibodies as a means of inhibiting angiogenesis, including in combination with VEGF inhibitors for the treatment of cancer, is a recent clinical development and may not become broadly accepted by physicians, patients, hospitals, cancer treatment centers, third-party payors and others in the medical community. Factors that will influence whether our product candidates are accepted in the market include:

- the clinical indications for which our product candidates are approved, if any;
- 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 or other regulatory authorities;
- 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 coverage and adequate reimbursement and pricing by governmental and commercial third-party payors;
- the willingness of patients to pay out-of-pocket in the absence of coverage by governmental and commercial third-party payors;
- 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 expect that in oncology indications, TRC105 will be most effective as a combination treatment with VEGF inhibitors. If VEGF inhibitors become associated with

presently unknown safety concerns, are withdrawn from the market or otherwise fall out of favor as cancer treatments among physicians, patients, hospitals, cancer treatment centers or others in the medical community, the market potential for TRC105 would likely be significantly harmed.

If, for any of these or other reasons, our product candidates fail to achieve market acceptance among physicians, patients, hospitals, cancer treatment centers, third-party payors 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.

We face intense competition and rapid technological change and the possibility that our competitors may develop therapies that are more advanced or effective than ours, which may adversely affect our financial condition and our ability to successfully commercialize our product candidates.

We face competition both in the United States and internationally, including from major multinational pharmaceutical companies, biotechnology companies and universities and other research institutions. For example, other pharmaceutical and biotechnology companies, including Pfizer, Inc. and Acceleron Pharma Inc., have active programs to develop therapies targeting proteins in the endoglin pathway that would compete directly with certain of our product candidates, including TRC105. Many other companies are developing other cancer therapies that, if successful, could change the standard of care for cancer patients and relegate anti-angiogenesis therapy to a last-line or niche role or make it obsolete.

Many of our competitors have substantially greater financial, technical and other resources, such as larger research and development staff and experienced marketing and manufacturing organizations. 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 may succeed in developing, acquiring or licensing on an exclusive basis, products that are more effective or less costly than any product candidate that we may develop, or achieve earlier patent protection, regulatory approval, product commercialization and market penetration than we do. Additionally, technologies developed by our competitors may render our potential product candidates uneconomical or obsolete, and we may not be successful in marketing our product candidates against competitors.

Under the terms of our license agreement with Case Western, we obtained an exclusive, worldwide license to certain patents, know-how and other intellectual property controlled by Case Western related to TRC102. Despite our exclusive license, Case Western retained the right to grant non-exclusive licenses to third parties in the same field of use as our exclusive license as a means to settle any intellectual property disputes Case Western may have in the future with such third parties. While Case Western has not made us aware of any present intent to exercise this right, there can be no guarantee that Case Western will not do so in the future or that it would not grant such an non-exclusive license to a competitor of ours seeking to develop and commercialize a product that is identical to TRC102 in the same field of use that we are pursuing. If this were to occur, and we did not have other intellectual property outside of the Case Western license agreement to prevent competitive products for the same indications, we may face competition much earlier than we currently anticipate and the value of TRC102 may decline substantially.

Even if we are successful in achieving regulatory approval to commercialize a product candidate faster than our competitors, we may face competition from "biosimilars" due to the changing regulatory environment. In the United States, the Biologics Price Competition and Innovation Act created an abbreviated approval pathway for biological products that are

demonstrated to be "highly similar," or "biosimilar," to or "interchangeable" with an FDA-approved biological product. This new pathway could allow competitors to reference data from biological products already approved after 12 years from the time of approval. Future FDA standards or criteria for determining biosimilarity and interchangeability, and FDA discretion to determine the nature and extent of product characterization, non-clinical testing and clinical testing on a product-by-product basis, may further facilitate the approval of biosimilar products and their ability to compete with our product candidates. In addition, companies may be developing biosimilars in other countries that could compete with our products. If competitors are able to obtain marketing approval for biosimilars referencing our products, our products may become subject to competition from such biosimilars, with the attendant competitive pressure and consequences. Any such event or further changes in the law could decrease the period for which we have exclusivity and consequently negatively impact our business and competitive position. Expiration or successful challenge of our applicable patent rights could also trigger competition from other products, assuming any relevant exclusivity period has expired.

Finally, as a result of the expiration or successful challenge of our patent rights, we could face litigation with respect to the validity and/or scope of patents relating to our competitors' products. The availability of our competitors' products could limit the demand, and the price we are able to charge, for any products that we may develop and commercialize.

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 on the availability of coverage and adequate 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. Coverage and adequate reimbursement from governmental healthcare programs, such as Medicare and Medicaid, and commercial payors are critical to new product acceptance.

Government authorities and other third-party payors, such as commercial health insurers and health maintenance organizations, decide which drugs and treatments they will cover and the amount of reimbursement. Coverage and 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.

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. 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 supporting scientific, clinical and cost-effectiveness data to each payor separately for the use of our products, with no assurance that coverage and adequate

reimbursement will be obtained. Even if we obtain coverage for a given product, the resulting reimbursement rates might not be adequate for us to achieve or sustain profitability or may require co-payments that patients find unacceptably high. 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.

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 European Union, 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. In addition, market acceptance and sales of our product candidates will depend significantly on the availability of coverage and adequate reimbursement from third-party payors for our product candidates.

Healthcare legislative reform measures may have a material adverse effect on our business and results of operations.

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 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, addressed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected, including our product candidates, increased the minimum Medicaid rebates owed by most 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, 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, and provided incentives to programs that increase the federal government's comparative effectiveness 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 up to 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, imaging centers and cancer treatment centers, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. 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. 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 obtain market acceptance in the medical community;
- 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.

We cannot predict whether future healthcare initiatives will be implemented at the federal or state level or in countries outside of the United States in which we may do business in the future, or the effect any future legislation or regulation will have on us.

If we are unable to establish sales and marketing capabilities or enter into agreements with third parties to market and sell our product candidates, we may be unable to generate any revenue.

Although we intend to establish a specialty sales and marketing organization to promote or co-promote TRC105 and/or TRC102 in North America, if approved in oncology indications, we currently have no such organization or capabilities, and the cost of establishing and maintaining such an organization may exceed the cost-effectiveness of doing so. In order to market any products that may be approved, we must build sales, marketing, managerial and other non-technical capabilities or make arrangements with third parties to perform these services.

In addition, we do not intend to establish our own sales and marketing organizations outside the United States and will therefore depend on third parties to commercialize our product candidates outside of the United States. Any third parties upon which we rely for commercializing our product candidates may not dedicate sufficient resources to the commercialization effort or may otherwise fail in their commercialization due to factors beyond our control. If we are unable to establish effective third party arrangements to enable the sale of our product candidates in territories outside of the United States, or if our potential future partners do not successfully commercialize our product candidates in these territories, our ability to generate revenue from product sales will be adversely affected.

If we elect to increase our expenditures to fund commercialization activities ourselves, we will need to obtain substantial additional capital, which may not be available to us on acceptable terms, or at all, when we are otherwise ready and able to commercially launch a product candidate. If we do not have sufficient funds, we will not be able to bring any product candidates to market or generate product revenue, including in the United States.

We and any partners that we may engage will be competing with many companies that currently have extensive and well-funded marketing and sales operations to commercialize alternative therapies. If we, alone or with commercialization partners, are unable to compete successfully against these established companies, the commercial success of any approved products will be limited.

If we obtain approval to commercialize any approved products outside of the United States, a variety of risks associated with international operations could materially adversely affect our business.

If TRC105 or other product candidates are approved for commercialization, we expect that we or our partners will be subject to additional risks related to entering into international business relationships, including:

- different regulatory requirements for drug approvals in foreign countries;
- reduced protection for intellectual property rights;
- unexpected changes in tariffs, trade barriers and 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;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad; and
- business interruptions resulting from geopolitical actions, including war and terrorism, or natural disasters including earthquakes, typhoons, floods and fires.

If we or our partners outside of the Unites States are unable to successfully manage these risks associated with international operations, the market potential for our product candidates outside the Unites States will be limited and our results of operations may be harmed.

Risks Related to Our Business and Industry

If we fail to develop, acquire or in-license other product candidates or products, our business and prospects will be limited.

We do not have internal new drug discovery capabilities or a technology platform with which to develop novel product candidates. Unless we develop or acquire these capabilities or a technology platform, our only means of expanding our product pipeline will be to acquire or in-license product candidates that complement or augment our current targets, or that otherwise fit into our development or strategic plans on terms that are acceptable to us. Identifying, selecting and acquiring or licensing promising product candidates requires substantial technical, financial and human resources. Efforts to do so may not result in the actual development, acquisition or license of a particular product candidate, potentially resulting in a diversion of our management's time and the expenditure of our resources with no resulting benefit. If we are unable to add additional product candidates to our pipeline, our long-term business and prospects will be limited.

If we fail to attract and keep senior management and key clinical operations and regulatory personnel, we may be unable to successfully develop our product candidates and execute our business strategy.

We are highly dependent on members of our senior management, including Charles Theuer, M.D., Ph.D., our President and Chief Executive Officer, and H Casey Logan, M.B.A., our Chief Business Officer. Our clinical development strategy and ability to directly manage our Phase 1 and Phase 2 clinical trials are also dependent on the members of our clinical operations and regulatory team. The loss of the services of any of these persons could impede the development of our product candidates and our ability to execute our business strategy. We may be particularly impacted by the unexpected loss of employees due to our small employee base and limited ability to quickly shift responsibilities to other employees in our organization. We do not maintain "key person" insurance for any of our executives or other employees.

Recruiting and retaining other qualified employees for our business, including scientific, quality assurance and technical personnel, will also be critical to our success. There is currently a shortage of skilled executives in our industry, which is likely to continue. As a result, competition for skilled personnel is intense, particularly in the San Diego, California area, and the turnover rate can be high. We may not be able to attract and retain personnel on acceptable terms given the competition among numerous pharmaceutical companies for individuals with similar skill sets. The inability to recruit or loss of the services of any executive or key employee could impede the progress of our development and strategic objectives.

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

We are exposed to the risk that our employees, independent contractors, principal investigators, consultants, vendors and commercial partners may engage in fraudulent conduct or other illegal activity. Misconduct by these parties could include intentional, reckless and/or negligent conduct or unauthorized activities that violate:

- FDA regulations, including those laws that require the reporting of true, complete and accurate information to the FDA;
- manufacturing standards;
- federal and state fraud and abuse laws and other healthcare laws;
- laws governing the conduct of business abroad; or
- laws that require the reporting of true and accurate financial information or data.

Additionally, these parties may fail to disclose unauthorized activities to us. In particular, sales, marketing and business arrangements in the healthcare industry are subject to extensive laws intended to prevent fraud, kickbacks, self-dealing and other abusive practices. These laws may restrict or prohibit a wide range of pricing, discounting, marketing and promotion, sales commission, customer incentive programs and other business arrangements. Misconduct could also involve the improper use of information obtained in the course of clinical trials, which could result in regulatory sanctions and serious harm to our reputation. It is not always possible to identify and deter misconduct by employees and other third parties, and the precautions we take to detect and prevent this activity 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. If any such actions are instituted against us, and we are not successful in defending ourselves or asserting our rights, those actions could have a significant impact on our business, including the imposition of

significant civil, criminal and administrative penalties, damages, monetary fines, possible exclusion from participation in Medicare, Medicaid and other U.S. federal healthcare programs, contractual damages, reputational harm, diminished profits and future earnings, and curtailment of our operations, any of which could adversely affect our ability to operate our business and our results of operations.

We may encounter difficulties in managing our growth and expanding our operations successfully.

As we seek to advance our product candidates through clinical trials and commercialization, we will need to expand our development, regulatory, manufacturing, marketing and sales capabilities or contract with additional third parties to provide these capabilities for us. As our operations expand, we expect that we will need to manage additional relationships with partners, consultants, suppliers and other third parties. Future growth will impose significant added responsibilities on members of our management, including having to divert a disproportionate amount of its attention away from day-to-day operating activities to implement and manage future growth. Our future financial performance and our ability to commercialize our product candidates and to compete effectively will depend, in part, on our ability to manage any future growth effectively. To that end, we must be able to manage our development efforts and clinical trials effectively and hire, train and integrate additional management, administrative and, if necessary, sales and marketing personnel. We may not be able to accomplish these tasks, and our failure to accomplish any of them could prevent us from successfully growing our company.

We are subject to extensive federal and state regulation, and our failure to comply with these laws could harm our business.

Although we do not currently have any products on the market, we are subject to healthcare regulation and enforcement by the federal government and the states in which we conduct our business. The laws that may affect our ability to operate include:

- the federal Anti-Kickback Statute, which applies to our business activities, including our marketing practices, educational programs, pricing policies and relationships with healthcare providers, by prohibiting, among other things, knowingly and willfully soliciting, receiving, offering or providing any remuneration (including any bribe, kickback or rebate) directly or indirectly, overtly or covertly, in cash or in kind, intended to induce or in return for the purchase or recommendation of any good, facility item or service reimbursable, in whole or in part, under a federal healthcare program, such as the Medicare or Medicaid programs;

- federal civil and criminal false claims laws and civil monetary penalty laws, including the federal False Claims Act, that prohibit, among other things, knowingly presenting, or causing to be presented, claims for payment from Medicare, Medicaid or other governmental healthcare programs that are false or fraudulent, or making a false statement to 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, and its implementing regulations, which created federal criminal laws that prohibit, among other things, knowingly and willfully executing, or attempting to execute, a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters;

- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, imposes certain regulatory and contractual requirements on covered entities

and their business associates regarding the privacy, security and transmission of individually identifiable health information;

- federal "sunshine" requirements imposed by the Affordable Care Act, on certain drug manufacturers regarding any transfers of value provided to physicians and teaching hospitals, and ownership and investment interests held by such physicians and their immediate family members; and

- state or foreign law equivalents of each of the above federal laws that may apply to items or services reimbursed by any third-party payor, including commercial insurers; state laws that require pharmaceutical companies to comply with the 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 and other potential referral sources; state 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 laws governing the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts.

It is possible that some of our business activities could be subject to challenge under one or more of such laws. In addition, recent health care reform legislation has strengthened certain of these laws. For example, the Affordable Care Act, among other things, amends the intent requirement of the federal Anti-Kickback and criminal healthcare fraud statutes. A person or entity no longer needs to have actual knowledge of these statutes or specific intent to violate them to have committed a violation. Moreover, the Affordable Care Act provides that 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 False Claims Act.

Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. If our operations are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including without limitation, administrative, civil and/or criminal penalties, damages, fines, disgorgement, contractual damages, reputational harm, exclusion from governmental health care programs, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our financial results.

We face potential product liability, and, if successful claims are brought against us, we may incur substantial liability.

The use of our product candidates in clinical trials and the sale of any products for which we obtain marketing approval exposes us to the risk of product liability claims. Product liability claims might be brought against us by consumers, healthcare providers, pharmaceutical companies or others selling or otherwise coming into contact with our product candidates. If we cannot successfully defend against product liability claims, we could incur substantial liability and costs. In addition, regardless of merit or eventual outcome, product liability claims may result in:

- impairment of our business reputation;

- withdrawal of clinical trial participants;

- costs due to related litigation;

- distraction of management's attention from our primary business;
- substantial monetary awards to patients or other claimants;
- the inability to commercialize our product candidates; and
- decreased demand for our product candidates, if approved for commercial sale.

We currently carry product liability insurance covering our clinical trials with limits of $5.0 million in the aggregate and $5.0 million per occurrence. Our current product liability insurance coverage may not be sufficient to reimburse us for any expenses or losses we may suffer. Moreover, insurance coverage is becoming increasingly expensive and in the future we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses due to liability. If we obtain marketing approval for our product candidates, we intend to expand our insurance coverage to include the sale of commercial products; however, we may be unable to obtain product liability insurance on commercially reasonable terms or in adequate amounts. On occasion, large judgments have been awarded in class action lawsuits based on drugs that had unanticipated adverse effects. A successful product liability claim or series of claims brought against us could cause our stock price to decline and, if judgments exceed our insurance coverage, could adversely affect our results of operations and business.

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 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 and abroad 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, including through obligations to indemnify our third party manufacturers, 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 development and production efforts or those of our third party manufacturers, which could harm our business, prospects, financial condition or results of operations.

Our ability to use our net operating loss carryforwards and certain other tax attributes may be limited.

As of December 31, 2013 we had federal and California net operating loss carryforwards, or NOLs, each of approximately $17.2 million, which expire in various years beginning in 2029, if not utilized. As of December 31, 2013, we had federal and California research and development tax credit carryforwards of approximately $0.5 million and $0.3 million, respectively. The federal research and development tax credit carryforwards expire in various years beginning in 2031, if not utilized. The California research and development credit will carry forward indefinitely. Under Sections 382 and 383 of Internal Revenue Code of 1986, as amended, or the Code, if a corporation undergoes an "ownership change," the corporation's ability to use its pre-change NOLs and other pre-change tax attributes, such as research tax credits, to offset its future post-change income and taxes may be limited. In general, an

"ownership change" occurs if there is a cumulative change in our ownership by "5% shareholders" that exceeds 50 percentage points over a rolling three year period. Similar rules may apply under state tax laws. We believe we have experienced certain ownership changes in the past and have reduced our deferred tax assets related to NOLs and research and development tax credit carryforwards accordingly. In the event that it is determined that we have in the past experienced additional ownership changes, or if we experience one or more ownership changes as a result of this offering and the concurrent private placement or future transactions in our stock, then we may be further limited in our ability to use our NOLs and other tax assets to reduce taxes owed on the net taxable income that we earn in the event that we attain profitability. Any such limitations on the ability to use our NOLs and other tax assets could adversely impact our business, financial condition and operating results in the event that we attain profitability.

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 current or future contractors and consultants are vulnerable to damage from computer viruses and unauthorized access. While we have not 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, third parties that are also sponsoring clinical trials involving our product candidates, such as NCI and Case Western, could experience similar events relating to their computer systems, which 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 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. In addition, NCI may be affected by government shutdowns or withdrawn funding, which may lead to suspension or termination of ongoing NCI-sponsored clinical development of our product candidates. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses. In addition, our ability to obtain clinical supplies of our product candidates could be disrupted if the operations of our third party manufacturers, including Lonza, are affected by a man-made or natural disaster or other business interruption. Our corporate headquarters are located in San Diego, California near major earthquake faults and fire zones. The ultimate impact on us 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.

Risks Related to Our Common Stock and this Offering

The market price of our common stock may be highly volatile, and you may not be able to resell your shares at or above the initial public offering price.

The trading price of our common stock is likely to be volatile. Our stock price could be subject to wide fluctuations in response to a variety of factors, including the following:

- adverse results or delays in clinical trials;
- inability to obtain additional funding;
- any delay in filing a BLA or an NDA for any of our product candidates and any adverse development or perceived adverse development with respect to the FDA's review of that BLA or NDA;
- failure to successfully develop and commercialize our product candidates;
- changes in laws or regulations applicable to our product candidates;
- inability to obtain adequate product supply for our product candidates, or the inability to do so at acceptable prices;
- adverse regulatory decisions;
- introduction of new products or technologies by our competitors;
- failure to meet or exceed product development or financial projections we provide to the public;
- failure to meet or exceed the estimates and projections of the investment community;
- the perception of the pharmaceutical industry by the public, legislatures, regulators and the investment community;
- announcements of significant acquisitions, collaborations, joint ventures or capital commitments by us or our competitors;
- disputes or other developments relating to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- additions or departures of key scientific or management personnel;
- significant lawsuits, including patent or stockholder litigation;
- changes in the market valuations of similar companies;
- sales of our common stock by us or our stockholders in the future; and
- trading volume of our common stock.

In addition, the stock market in general, and the Nasdaq Global Market 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.

An active trading market for our common stock may not develop.

Prior to this offering, there has not been a public market for 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. If an active market for our common stock does not develop, you may not be able to sell your shares

quickly or at the market price. The initial public offering price for the shares will be determined by negotiations between us and representatives of the underwriters and may not be indicative of prices that will prevail in the trading market.

An active trading market for our common stock will depend in part on the availability of 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.

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.

Our executive officers, directors, 5% or greater stockholders and their affiliates beneficially owned approximately 69% of our voting stock as of November 30, 2014. Based upon the assumed number of shares to be sold in this offering and the concurrent private placement as set forth on the cover page of this prospectus, upon the closing of this offering and the concurrent private placement, that same group will beneficially own approximately 49% of our outstanding voting stock, which does not include any effect of these stockholders purchasing additional shares in this offering. 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, acting together, 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 believe 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.

NEA has indicated an interest in purchasing up to approximately $5.0 million of shares of our common stock at a price per share equal to the initial public offering price (or 384,615 shares based on the assumed initial public offering price of $13.00 per share) in a proposed private placement that would close concurrently with this offering. The sale of these shares to NEA 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 $8.2 million of shares of our common stock, at a price per share equal to the initial public offering price (or approximately 630,000 shares based on the assumed initial public offering price of $13.00 per share).

The concurrent private placement and the potential purchases of shares in this offering to certain of our existing stockholders and their affiliated entities will reduce the available public float for our common stock because NEA will be restricted from selling the shares pursuant to restrictions under applicable securities laws, and our existing stockholders and their affiliates will be restricted from selling any shares purchased by them pursuant to lock-up agreements they have entered into with the underwriters in this offering. As a result, the sale of common stock in the concurrent private placement and to our existing stockholders and their affiliates

will reduce the liquidity of our common stock relative to what it would have been had these shares been sold in this offering and been purchased by investors that were not affiliated with us. Following this offering and the concurrent private placement, the number of shares beneficially owned by NEA and our other principal stockholders after this offering will be as set forth in the beneficial ownership table in "Principal Stockholders" elsewhere in this prospectus.

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 exemption from compliance with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, or 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 a non-binding advisory vote on executive compensation. 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 billion, or (c) in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds $700 million as of the prior June 30th, and (2) the date on which we have issued more than $1 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 exemption from compliance with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act and reduced disclosure obligations regarding executive compensation in 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.

If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results or prevent fraud. As a result, stockholders could lose confidence in our financial and other public reporting, which would harm our business and the trading price of our common stock.

Effective internal controls over financial reporting are necessary for us to provide reliable financial reports and, together with adequate disclosure controls and procedures, are designed to prevent fraud. Any failure to implement required new or improved controls, or difficulties encountered in their implementation could cause us to fail to meet our reporting obligations. In addition, any testing by us conducted in connection with Section 404 of the Sarbanes-Oxley Act, or the subsequent testing by our independent registered public accounting firm, may reveal

deficiencies in our internal controls over financial reporting that are deemed to be material weaknesses or that may require prospective or retroactive changes to our consolidated financial statements or identify other areas for further attention or improvement. Inferior internal controls could also cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our common stock.

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. In addition, the Sarbanes-Oxley Act of 2002, as well as rules subsequently implemented by the SEC, and the Nasdaq Global Market have imposed various requirements on public companies. 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 areas such as "say on pay" and proxy access. 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 (in ways we cannot currently anticipate) the manner in which we operate our business. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations will increase our legal and financial compliance costs and will make some activities more time-consuming and costly. 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 our current levels of such coverage.

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

Investors purchasing common stock in this offering will pay a price per share that substantially exceeds the pro forma as adjusted book value per share of our tangible assets after subtracting our liabilities. As a result, investors purchasing common stock in this offering and the concurrent private placement will incur immediate dilution of $7.54 per share, based on the assumed initial public offering price of $13.00 per share and our pro forma as adjusted net tangible book value as of September 30, 2014. For more information on the dilution you may suffer as a result of investing in this offering, see "Dilution."

This dilution is due to the substantially lower price paid by our investors who purchased shares prior to this offering as compared to the price offered to the public in this offering, and the exercise of stock options granted to our employees. In addition, as of September 30, 2014, options to purchase 709,028 shares of our common stock at a weighted-average exercise price of $1.36 per share were outstanding. The exercise of any of these options would result in additional dilution. 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.

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

Sales of a substantial number of shares of our common stock in the public market or the perception that these sales might occur, could depress the market price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. We

are unable to predict the effect that sales may have on the prevailing market price of our common stock.

Substantially all of our existing stockholders are subject to lock-up agreements with the underwriters of this offering that restrict the stockholders' ability to transfer shares of our common stock for 180 days from the date of this prospectus. The lock-up agreements limit the number of shares of common stock that may be sold immediately following the public offering. Subject to certain limitations, including sales volume limitations with respect to shares held by our affiliates, substantially all of our outstanding shares prior to this offering will become eligible for sale upon expiration of the lock-up period, as calculated and described in more detail in the section entitled "Shares Eligible for Future Sale." In addition, shares issued or issuable upon exercise of options that are vested as of the expiration of the lock-up period will be eligible for sale at that time. Sales of stock by these stockholders could have a material adverse effect on the trading price of our common stock.

Certain holders of our securities are entitled to rights with respect to the registration of their shares under the Securities Act, subject to the 180-day lock-up arrangement described above. Registration of these shares under the Securities Act would result in the shares becoming freely tradable without restriction 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 equity incentive plans, 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 will be needed in the future to continue our planned operations. To the extent we raise additional capital by issuing equity securities, our stockholders may experience substantial dilution. 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 in more than one transaction, investors may be materially diluted by subsequent sales. These sales may also result in material dilution to our existing stockholders, and new investors could gain rights superior to our existing stockholders.

We are at risk of securities class action litigation.

In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because pharmaceutical companies have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of management's attention and resources, which could harm our business.

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 "Use of Proceeds." 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. 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.

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

We have never declared or paid any cash dividend on our common 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. Additionally, our credit agreement with SVB contains covenants that restrict our ability to pay dividends. Any return to stockholders will therefore be limited to the appreciation of their stock.

Provisions in our amended and restated certificate of incorporation and bylaws, as well as provisions of Delaware law, could make it more difficult for a third party to acquire us or increase the cost of acquiring us, even if doing so would benefit our stockholders or remove our current management.

Some provisions of our charter documents and Delaware law may have anti-takeover effects that could discourage an acquisition of us by others, even if an acquisition would be beneficial to our stockholders and may prevent attempts by our stockholders to replace or remove our current management. These provisions include:

- authorizing the issuance of "blank check" preferred stock, the terms of which may be established and shares of which may be issued without stockholder approval;
- limiting the removal of directors by the stockholders;
- creating a staggered board of directors;
- prohibiting stockholder action by written consent, thereby requiring all stockholder actions to be taken at a meeting of our stockholders;
- eliminating the ability of stockholders to call a special meeting of stockholders; and
- establishing advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted upon at stockholder meetings.

These provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors, which is responsible for appointing the members of our management. In addition, we are subject to Section 203 of the Delaware General Corporation Law, which generally prohibits a Delaware corporation from engaging in any of a broad range of business combinations with an interested stockholder for a period of three years following the date on which the stockholder became an interested stockholder, unless such transactions are approved by our board of directors. This provision could have the effect of delaying or preventing a change of control, whether or not it is desired by or beneficial to our stockholders. Further, other provisions of Delaware law may also discourage, delay or prevent someone from acquiring us or merging with us.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the sections entitled "Summary," "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Business," contains forward-looking statements. We may, in some cases, use words such as "anticipate," "believe," "could," "estimate," "expect," "intend," "may," "plan," "potential," "predict," "project," "should," "will," "would" or the negative of those terms, and similar expressions that convey uncertainty of future events or outcomes, to identify these forward-looking statements. Any statements contained herein that are not statements of historical facts may be deemed to be forward-looking statements. Forward-looking statements in this prospectus include, but are not limited to, statements about:

The forward-looking statements in this prospectus include, among other things, statements about:

- the success, cost and timing of results of our and our collaborators' ongoing clinical trials;
- our and our collaborators' plans to develop and commercialize our product candidates;
- the potential benefits of our collaboration arrangements and our ability to enter into additional collaboration arrangements;
- our regulatory strategy and potential benefits associated therewith;
- the timing of, and our ability to, obtain and maintain regulatory approvals for our product candidates;
- the rate and degree of market acceptance and clinical utility of any approved product candidate;
- the success of competing products that are or may become available;
- the size and growth potential of the markets for our product candidates, and our ability to serve those markets;
- our commercialization, marketing and manufacturing capabilities and strategy;
- our intellectual property position;
- our estimates regarding expenses, future revenues, capital requirements, the sufficiency of our current and expected cash resources, and our need for additional financing;
- our ability to realize the anticipated benefits associated with our capital efficiency focused initiatives; and
- our anticipated use of proceeds from this offering and the concurrent private placement.

These forward-looking statements reflect our management's beliefs and views with respect to future events and are based on estimates and assumptions as of the date of this prospectus and are subject to risks and uncertainties. We discuss many of these risks in greater detail under "Risk Factors." Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. Given these uncertainties, you should not place undue reliance on these forward-looking statements.

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in this prospectus by these cautionary statements. Except as required by law, we undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise.

USE OF PROCEEDS

We estimate that we will receive net proceeds of approximately $40.4 million (or approximately $47.0 million if the underwriters exercise in full their option to purchase additional shares) from the sale of the shares of common stock offered by us in this offering, excluding any proceeds from the concurrent private placement, based on the assumed initial public offering price of $13.00 per share, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. We also expect to receive net proceeds of $4.6 million from the sale by us of shares of our common stock in the concurrent private placement, for an aggregate amount to be raised by us in this offering and the concurrent private placement of $45.0 million, based on the assumed initial public offering price of $13.00 per share, and after deducting the estimated placement agent fees and estimated offering expenses payable by us. Because we have not entered into any definitive agreements with NEA related to the concurrent private placement, there can be no guarantee that the concurrent private placement will take place or that the terms of the concurrent private placement will be consistent with those assumed in this prospectus. For more information, please see "Certain Relationships and Related Party Transactions—Concurrent Private Placement." The private placement with NEA is contingent upon, and will occur concurrently with, the closing of this offering.

A $1.00 increase (decrease) in the assumed initial public offering price of $13.00 per share would increase (decrease) the net proceeds to us from this offering by approximately $3.3 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 estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Similarly, a one million share increase (decrease) in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase (decrease) the net proceeds to us by $12.1 million, assuming the assumed initial public offering price remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The principal purposes of this offering are to obtain additional capital to support our operations, to establish a public market for our common stock and to facilitate our future access to the public equity markets. We intend to use the net proceeds from this offering as follows:

- approximately $15.0 million to initiate manufacturing activities required for regulatory approval;
- approximately $9.0 million to initiate clinical activities for our anticipated initial Phase 3 clinical trial of TRC105;
- approximately $3.0 million to fund additional Phase 1 and Phase 2 clinical trials of TRC105 in large market oncology indications such as colorectal cancer, lung cancer, breast cancer and hepatocellular carcinoma;
- approximately $0.5 million to provide clinical supply of TRC102 for and to provide support for NCI's conduct of our four anticipated Phase 1 or Phase 2 clinical trials of TRC102 in combination with chemotherapeutics;
- approximately $6.0 million to fund our preclinical studies of TRC205 in non-cardiac and cardiac models of fibrosis and obtain the supply of TRC205 for our anticipated Phase 1 clinical trials; and
- the remainder for working capital and other general corporate purposes, including funding the costs of operating as a public company.

We may also use a portion of the remaining net proceeds to in-license, acquire, or invest in complementary businesses, technologies, products or assets. However we have no current commitments or obligations to do so. In addition, we plan to use our existing cash to fund our obligations under our ongoing Phase 2 clinical trials of TRC105 in combination with Inlyta for renal cell carcinoma and Votrient for soft tissue carcinoma. Additionally, our existing cash will fund our obligations under our ongoing Phase 2 clinical trial of TRC105 in combination with Avastin for glioblastoma and our ongoing Phase 2 clinical trial of TRC105 in combination with Nexavar for hepatocellular carcinoma, which are sponsored by NCI, and our three ongoing Phase 1 clinical trials of TRC102 in combination with either Temodar or Fludara, which are sponsored by either NCI or Case Western. We expect to use the net proceeds from the concurrent private placement for additional working capital and general corporate purposes. We believe that the net proceeds from this offering and our existing cash will be sufficient to fund our operations for at least the next 18 months. In particular, we estimate that such funds will be sufficient to enable us to (1) complete our ongoing Phase 2 clinical trials of TRC105 for renal cell carcinoma, soft tissue sarcoma, hepatocellular carcinoma and glioblastoma, (2) obtain the supply of TRC105 and initiate clinical and regulatory activities for our anticipated initial Phase 3 clinical trials of TRC105, (3) complete additional Phase 1 and Phase 2 clinical trials of TRC105 in large market oncology indications, (4) complete our four anticipated Phase 1 or Phase 2 clinical trials of TRC102 in combination with chemotherapeutics and (5) obtain the supply of TRC205 and initiate clinical trials in fibrosis.

Our expected use of net proceeds from this offering and the concurrent private placement represents our current intentions based upon our present plans and business condition. As of the date of this prospectus, we cannot predict with certainty all of the particular uses for the net proceeds from this offering and the concurrent private placement, or the amounts that we will actually spend on the uses set forth above. The amounts and timing of our actual use of the net proceeds will vary depending on numerous factors, including the outcomes of our ongoing and planned clinical trials and the costs of our research and development activities, as well as the amount of cash used in our operations. As a result, our management will have broad discretion in the application of the net proceeds, and investors will be relying on our judgment regarding the application of the net proceeds.

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

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain all available funds and any future earnings to support our operations and finance the growth and development of our business. We do not intend to pay cash dividends on our common stock for the foreseeable future. Any future determination related to our dividend policy will be made at the discretion of our board of directors and will depend upon, among other factors, our results of operations, financial condition, capital requirements, contractual restrictions, business prospects and other factors our board of directors may deem relevant. In addition, the terms of our loan and security agreement with SVB, dated November 14, 2013, as amended on June 4, 2014, prohibit us from paying dividends, or making any distribution or payment or redeeming, retiring or purchasing any capital stock (other than repurchases in specific instances) without the prior written consent of SVB.

CAPITALIZATION

The following table sets forth our cash and capitalization as of September 30, 2014:

- on an actual basis;
- on a pro forma basis to give effect to (1) the filing and effectiveness of our amended and restated certificate of incorporation, (2) the conversion of all our outstanding shares of redeemable convertible preferred stock as of September 30, 2014 into an aggregate of 6,369,567 shares of our common stock, and the resultant reclassification of our redeemable convertible preferred stock to stockholders' deficit and (3) the adjustment of our outstanding warrants to purchase redeemable convertible preferred stock into warrants to purchase 38,758 shares of our common stock, and the resultant reclassification of our preferred stock warrant liabilities to additional paid-in capital, a component of stockholders' deficit, all of which will occur in connection with the closing of this offering; and
- on a pro forma as adjusted basis to give further effect to (i) our sale in this offering of 3,600,000 shares of common stock at the assumed initial public offering price of $13.00 per share after deducting the underwriting discounts and commissions and estimated offering expenses payable by us and (ii) the sale of $5.0 million of shares of our common stock at a price per share equal to the initial public offering price (or 384,615 shares based on the assumed initial public offering price of $13.00 per share) in the concurrent private placement, after deducting estimated placement agent fees and expenses payable by us. Because we have not entered into any definitive agreements with NEA related to the concurrent private placement, there can be no guarantee that the concurrent private placement will take place or that the terms of the concurrent private placement will be consistent with those assumed in this prospectus.

The pro forma as adjusted information below is illustrative only and our cash and capitalization following the closing of this offering and the concurrent private placement will be adjusted based on the actual initial public offering price and other terms of this offering and the concurrent private placement determined at pricing. You should read the following table together with "Management's Discussion and Analysis of Financial Condition and Results of Operations," "Description of Capital Stock," and the financial statements and related notes appearing elsewhere in this prospectus.

	As of September 30, 2014		
	Actual	Pro Forma	Pro Forma As Adjusted[1]
	(unaudited) (in thousands, except share and per share data)		
Cash	$ 39,207	$ 39,207	$ 85,068
Capitalization:			
Long-term debt (including current portion)	$ 9,464	$ 9,464	$ 9,464
Warrant liabilities	235	—	—
Redeemable convertible preferred stock, $0.001 par value; 24,900,000 shares authorized and 24,650,273 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	49,801	—	—
Stockholders' deficit:			
Preferred stock, $0.001 par value; no shares authorized, issued and outstanding, actual; 10,000,000 shares authorized and no shares issued and outstanding, pro forma and pro forma as adjusted	—	—	—
Common stock, $0.001 par value; 40,000,000 shares authorized and 1,623,239 shares issued and outstanding, actual; 200,000,000 shares authorized and 7,992,806 shares issued and outstanding, pro forma; 200,000,000 shares authorized and 11,977,421 shares issued and outstanding, pro forma as adjusted	2	8	12
Additional paid-in capital	1,980	52,010	97,044
Accumulated deficit	(31,631)	(31,631)	(31,631)
Total stockholders' (deficit) equity	(29,649)	20,387	65,425
Total capitalization	$ 29,851	$ 29,851	$ 74,889

(1) A $1.00 increase (decrease) in the assumed initial public offering price of $13.00 per share would increase (decrease) each of cash, additional paid-in capital, total stockholders' equity (deficit) and total capitalization by approximately $3.3 million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. Similarly, each increase (decrease) of one million shares in the number of shares offered by us would increase (decrease) each of cash, total stockholders' equity (deficit) and total capitalization by approximately $12.1 million, assuming the assumed initial public offering price remains the same, and after deducting the estimated underwriting discounts and commissions 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 common shares shown in the table above is based on the number of shares of our common stock outstanding as of September 30, 2014, and excludes:

- 709,028 shares of common stock issuable upon the exercise of outstanding stock options as of September 30, 2014 at a weighted-average exercise price of $1.36 per share;
- 38,758 shares of common stock issuable upon the exercise of outstanding warrants as of September 30, 2014, at an exercise price of $7.74 per share;
- 183,462 shares of common stock reserved for future issuance under the ESPP, which will become effective upon the execution and delivery of the underwriting agreement for this offering; and
- 801,033 shares of common stock reserved for future issuance under the 2015 plan, which will become effective upon the execution and delivery of the underwriting agreement for this offering, plus 353,560 shares of common stock reserved for issuance under the 2011 plan, as of September 30, 2014, which shares will be added to the shares reserved under the 2015 plan upon its effectiveness.

DILUTION

If you invest in our common stock in this offering, your ownership interest will be immediately 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 after this offering and the concurrent private placement.

As of September 30, 2014, we had a historical net tangible book deficit of $(29.6) million, or $(18.27) per share of common stock, based on 1,623,239 shares of common stock outstanding at September 30, 2014. Our historical net tangible book value per share represents the amount of our total tangible assets less total liabilities and redeemable convertible preferred stock, divided by the total number of shares of common stock outstanding at September 30, 2014.

On a pro forma basis, after giving effect to (1) the conversion of all our outstanding shares of redeemable convertible preferred stock as of September 30, 2014 into an aggregate of 6,369,567 shares of our common stock, and the resultant reclassification of our redeemable convertible preferred stock to stockholders' deficit and (2) the adjustment of our outstanding warrants to purchase redeemable convertible preferred stock into warrants to purchase 38,758 shares of our common stock, and the resultant reclassification of our preferred stock warrant liabilities to additional paid-in capital, a component of stockholders' deficit, all of which will occur in connection with the closing of this offering, our pro forma net tangible book value as of September 30, 2014 would have been approximately $20.4 million, or approximately $2.55 per share of our common stock.

After giving further effect to the sale of 3,600,000 shares of common stock that we are offering at the assumed initial public offering price of $13.00 per share, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, and to the sale of $5.0 million of shares of our common stock at a price per share equal to the initial public offering price (or 384,615 shares based on the assumed initial public offering price of $13.00 per share) in the concurrent private placement, after deducting estimated placement agent fees and expenses payable by us, our pro forma as adjusted net tangible book value as of September 30, 2014 would have been approximately $65.4 million, or approximately $5.46 per share. This amount represents an immediate increase in pro forma net tangible book value of $2.91 per share to our existing stockholders and an immediate dilution in pro forma net tangible book value of approximately $7.54 per share to new investors participating in this offering. Because we have not entered into any definitive agreements with NEA related to the concurrent private placement, there can be no guarantee that the concurrent private placement will take place or that the terms of the concurrent private placement will be consistent with those assumed in this prospectus.

Dilution per share to new investors is determined by subtracting pro forma as adjusted net tangible book value per share after this offering from the initial public offering price per share

paid by new investors. The following table illustrates this dilution (without giving effect to any exercise by the underwriters of their over-allotment option):

Assumed initial public offering price per share		$ 13.00
Historical net tangible book deficit per share at September 30, 2014, before giving effect to this offering and the concurrent private placement	$ (18.27)	
Pro forma increase per share attributable to pro forma transactions described above	20.82	
Pro forma net tangible book value per share at September 30, 2014, before giving effect to this offering and the concurrent private placement	$ 2.55	
Increase in pro forma net tangible book value per share attributable to investors participating in this offering and the concurrent private placement	2.91	
Pro forma as adjusted net tangible book value per share after this offering and the concurrent private placement		5.46
Dilution per share to new investors participating in this offering and the concurrent private placement		$ 7.54

Each $1.00 increase (decrease) in the assumed initial public offering price of $13.00 per share would increase (decrease) the pro forma as adjusted net tangible book value per share after this offering and the concurrent private placement by approximately $0.30, and dilution in pro forma net tangible book value per share to new investors by approximately $0.70, 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 estimated underwriting discounts and commissions and estimated offering expenses payable by us.

We may also increase or decrease the number of shares we are offering. An increase of one million shares in the number of shares offered by us, as set forth on the cover page of this prospectus, would increase our pro forma as adjusted net tangible book value per share after this offering and the concurrent private placement by approximately $0.51 and decrease the dilution to new investors participating in this offering and the concurrent private placement by approximately $0.51 per share, assuming that the assumed initial public offering price remains the same, and after deducting the estimated underwriting discounts and commissions and the estimated offering expenses payable by us. Similarly, a decrease of one million shares in the number of shares offered by us, as set forth on the cover page of this prospectus, would decrease the pro forma as adjusted net tangible book value per share after this offering and the concurrent private placement by approximately $0.60 and increase the dilution to new investors participating in this offering and the concurrent private placement by approximately $0.60 per share, assuming that the assumed initial public offering price remains the same, and after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters exercise their over-allotment option to purchase 540,000 additional shares of our common stock in full in this offering, the pro forma as adjusted net tangible book value after this offering and the concurrent private placement would be $5.75 per share, the increase in pro forma net tangible book value per share to existing stockholders would be $3.20 per share and the dilution per share to new investors would be $7.25 per share, in each case based on the assumed initial public offering price of $13.00 per share.

The foregoing discussion and table are based on 7,992,806 shares of common stock outstanding as of September 30, 2014, after giving effect to the conversion of all our outstanding

redeemable convertible preferred stock as of September 30, 2014 into an aggregate of 6,369,567 shares of common stock, and exclude:

- 709,028 shares of common stock issuable upon the exercise of outstanding stock options as of September 30, 2014 at a weighted-average exercise price of $1.36 per share;
- 38,758 shares of common stock issuable upon the exercise of outstanding warrants as of September 30, 2014, at an exercise price of $7.74 per share;
- 183,462 shares of common stock reserved for future issuance under the ESPP, which will become effective upon the execution and delivery of the underwriting agreement for this offering; and
- 801,033 shares of common stock reserved for future issuance under the 2015 plan, which will become effective upon the execution and delivery of the underwriting agreement for this offering, plus 353,560 shares of common stock reserved for issuance under the 2011 plan as of September 30, 2014, which shares will be added to the shares reserved under the 2015 plan upon its effectiveness.

To the extent any of these outstanding options or warrants are exercised, there will be further dilution to new investors. If all of such outstanding options and warrants had been exercised as of September 30, 2014, the pro forma as adjusted net tangible book value per share after this offering and the concurrent private placement would be $5.24, and total dilution per share to new investors would be $7.76.

Certain of our principal stockholders and their affiliated entities, including stockholders affiliated with our directors, have indicated an interest in purchasing up to approximately $8.2 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. The foregoing discussion and table do not reflect any potential purchases by these stockholders.

SELECTED FINANCIAL DATA

The following tables set forth our selected financial data as of, and for the periods ended on, the dates indicated. The selected statement of operations data for the years ended December 31, 2012 and 2013 and the summary balance sheet data as of December 31, 2012 and 2013 are derived from our audited financial statements and related notes appearing elsewhere in this prospectus. The summary statement of operations data for the nine months ended September 30, 2013 and 2014 and balance sheet data as of September 30, 2014 are derived from our unaudited financial statements and related notes appearing elsewhere in this prospectus. The unaudited financial statements have been prepared on a basis consistent with our audited financial statements included in this prospectus and, in the opinion of management, reflect all adjustments, consisting only of normal recurring adjustments, necessary to fairly state our financial position as of September 30, 2014 and results of operations for the nine months ended September 30, 2013 and 2014. You should read this data together with our financial statements and related notes appearing elsewhere in this prospectus and the information included in the section of this prospectus entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations." Our historical results are not necessarily indicative of results that may be expected in the future and results of interim periods are not necessarily indicative of the results for the entire year.

	Years Ended December 31,		Nine Months Ended September 30,	
	2012	2013	2013	2014
			(unaudited)	
	(in thousands, except share and per share data)			
Statement of Operations Data:				
Collaboration revenue	$ —	$ —	$ —	$ 2,558
Operating expenses:				
Research and development	3,777	6,076	4,316	5,090
General and administrative	1,449	1,484	1,096	1,394
Total operating expenses	5,226	7,560	5,412	6,484
Loss from operations	(5,226)	(7,560)	(5,412)	(3,926)
Other income (expense)	298	(148)	(84)	(334)
Net loss	(4,928)	(7,708)	(5,496)	(4,260)
Accretion to redemption value of redeemable convertible preferred stock	(216)	(248)	(183)	(202)
Net loss attributable to common stockholders	$ (5,144)	$ (7,956)	$ (5,679)	$ (4,462)
Net loss per share attributable to common stockholders, basic and diluted[(1)]	$ (3.19)	$ (4.93)	$ (3.52)	$ (2.76)
Weighted-average shares outstanding, basic and diluted[(1)]	1,614,851	1,614,851	1,614,851	1,614,903
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)[(1)]		$ (1.67)		$ (0.88)
Pro forma weighted-average shares outstanding, basic and diluted (unaudited)[(1)]		4,589,074		4,909,376

(1) See Note 1 to our financial statements included elsewhere in this prospectus for an explanation of the methods used to calculate the historical and pro forma net loss per share, basic and diluted, and the number of shares used in the computation of these per share amounts.

	As of December 31,		As of September 30,
	2012	2013	2014
			(unaudited)
	(in thousands)		
Balance Sheet Data:			
Cash	$ 2,459	$ 2,276	$ 39,207
Total assets	2,611	2,419	41,306
Working capital	1,916	328	27,411
Preferred stock warrant liabilities	—	97	235
Long-term debt, less current portion	—	1,764	5,455
Redeemable convertible preferred stock	19,069	23,929	49,801
Accumulated deficit	(19,663)	(27,371)	(31,631)
Total stockholders' deficit	(17,663)	(25,344)	(29,649)

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

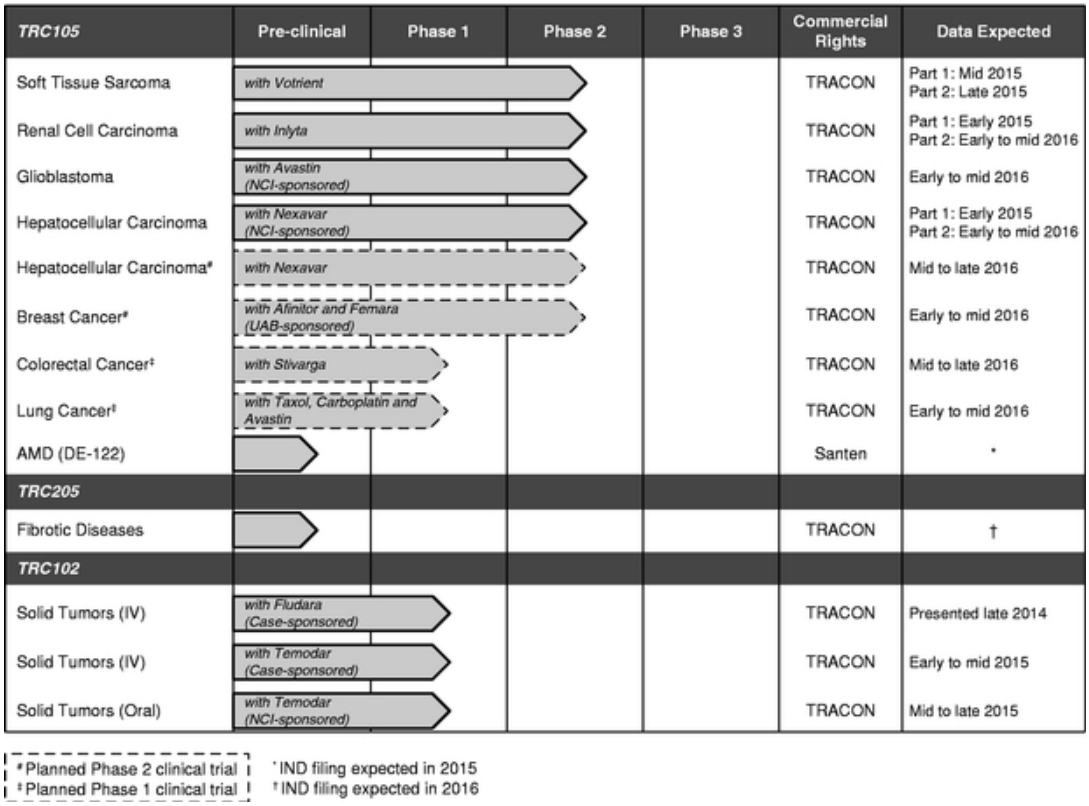
You should read the following discussion and analysis of our financial condition and results of operations together with "Selected Financial Data" and our financial statements and the related notes and other financial information included elsewhere in this prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to our plans and strategy for our business and future financial performance, includes forward-looking statements that are based upon current beliefs, plans and expectations and involve risks, uncertainties and assumptions. You should review the "Risk Factors" section of this prospectus for a discussion of important factors that could cause our actual results and the timing of selected events to differ materially from those described in or implied by the forward-looking statements contained in the following discussion and analysis. Please also see the section of this prospectus entitled "Special Note Regarding Forward-Looking Statements."

Overview

We are a clinical stage biopharmaceutical company focused on the development and commercialization of novel targeted therapeutics for cancer, AMD and fibrotic diseases. We are a leader in the field of endoglin biology and are using our expertise to develop antibodies that bind to the endoglin receptor. Endoglin is essential to angiogenesis, the process of new blood vessel formation, and a key contributor to the development of fibrosis, or tissue scarring. Our lead product candidate, TRC105, is an anti-endoglin antibody that is being developed for the treatment of multiple solid tumor types in combination with VEGF inhibitors. TRC105 has been studied in six completed Phase 2 clinical trials and three completed Phase 1 clinical trials, and it is currently being studied in four Phase 2 clinical trials. Our other product candidates are TRC205, an anti-endoglin antibody that is in preclinical development for the treatment of fibrotic diseases, and TRC102, which is a small molecule that is in clinical development for the treatment of lung cancer and glioblastoma. In March 2014, Santen licensed from us exclusive worldwide rights to develop and commercialize our anti-endoglin antibodies for ophthalmology indications.

We have collaborated with NCI, which has selected TRC105 and TRC102 for federal funding of clinical development, as well as Case Western. Under these collaborations, NCI has sponsored or is sponsoring seven completed or ongoing clinical trials of TRC105 and TRC102, and Case Western is sponsoring two ongoing clinical trials of TRC102. We anticipate that NCI will complete ongoing Phase 2 clinical trials of TRC105 and may initiate other Phase 2 clinical trials in addition to the Phase 2 clinical trials of TRC105 that we are sponsoring. Based on correspondence with NCI in June 2014, we expect that Phase 2 clinical trials of TRC102 will be completed with NCI funding. If merited by Phase 2 data, we expect to fund initial Phase 3 clinical trials of TRC105 and TRC102 and, based on NCI's past course of conduct with similarly situated pharmaceutical companies in which it has sponsored pivotal clinical trials following receipt of positive Phase 2 data, we anticipate that NCI will sponsor Phase 3 clinical trials in additional indications.

The following chart summarizes key information regarding ongoing and planned development of our product candidate pipeline:



Since our inception in 2004, we have devoted substantially all of our resources to research and development efforts relating to our product candidates, including conducting clinical trials and developing manufacturing capabilities, in-licensing related intellectual property, providing general and administrative support for these operations and protecting our intellectual property. We have not generated any revenue from product sales and, to date, have funded our operations primarily with the aggregate net proceeds of $79.1 million from the private placement of redeemable convertible preferred stock and common stock, a $10.0 million one-time upfront fee received in connection with our collaboration with Santen and $10.0 million of commercial bank debt under our credit facility with SVB.

We do not own or operate, nor do we expect to own or operate, facilitates for product manufacturing, storage, distribution or testing. We contract with third parties for the manufacture of our product candidates, including with Lonza for the manufacture of TRC105 drug substance, and we intend to continue to do so in the future.

As of December 29, 2014, we had a portfolio of 12 issued patents and four pending patent applications in the United States and 16 issued patents and 28 pending patent applications outside the United States, with pending and issued claims relating to our product candidates. Thirteen of our issued patents cover anti-endoglin antibodies that we have selected as the core focus of our development approach. These figures include in-licensed patents and patent applications to which we hold exclusive commercial rights in non-ophthalmologic fields of use.

We have incurred losses from operations in each year since our inception. Our net losses were $7.7 million for the year ended December 31, 2013 and $4.3 million for the nine months ended September 30, 2014. As of September 30, 2014, we had an accumulated deficit of $31.6 million.

We expect to continue to incur significant expenses and increasing operating losses for at least the next several years. Our net losses may fluctuate significantly from quarter to quarter and year to year. We expect our expenses will increase substantially in connection with our ongoing activities as we:

- continue to conduct clinical trials of our product candidates;
- continue our research and development efforts;
- manufacture preclinical study and clinical trial materials;
- maintain, expand and protect our intellectual property portfolio;
- seek regulatory approvals for our product candidates that successfully complete clinical trials;
- hire additional staff, including clinical, operational, financial and technical personnel to execute on our business plan and create additional infrastructure to support our operations as a public company; and
- implement operational, financial and management systems.

We do not expect to generate any revenues from product sales until we successfully complete development and obtain regulatory approval for one or more of our product candidates, which we expect will take a number of years. If we obtain regulatory approval for any of our product candidates, we expect to incur significant commercialization expenses related to product sales, marketing, manufacturing and distribution. Accordingly, we will need to raise substantial additional capital beyond the expected net proceeds from this offering and the concurrent private placement. The amount and timing of our future funding requirements will depend on many factors, including the pace and results of our preclinical and clinical development efforts and the timing and nature of the regulatory approval process for our product candidates. We anticipate that we will seek to fund our operations through public or private equity or debt financings or other sources. However, we may be unable to raise additional funds or enter into such other arrangements when needed on favorable terms or at all. Our failure to raise capital or enter into such other arrangements when needed would have a negative impact on our financial condition and ability to develop our product candidates.

As of September 30, 2014, we had cash in the amount of $39.2 million. We estimate that our net proceeds from this offering and the concurrent private placement will be approximately $45.0 million, based upon the assumed initial public offering price of $13.00 per share, and after deducting the estimated underwriting discounts and commissions, estimated placement agent fees and estimated offering expenses payable by us. Because we have not entered into any definitive agreements with NEA related to the concurrent private placement, there can be no guarantee that the concurrent private placement will take place or that the terms of the concurrent private placement will be consistent with those assumed in this prospectus. We believe that our existing cash as of September 30, 2014 and the estimated net proceeds from this offering, together with interest thereon, will be sufficient to meet our anticipated cash requirements for at least the next 18 months.

Collaboration and License Agreements

Santen Pharmaceutical Co., Ltd.

In March 2014, we entered into a license agreement with Santen, under which we granted Santen an exclusive, worldwide license to certain patents, information and know-how related to TRC105, or the TRC105 Technology. Under the agreement, Santen is permitted to use, develop, manufacture and commercialize TRC105 products for ophthalmology indications, excluding systemic treatment of ocular tumors. Santen also has the right to grant sublicenses to affiliates and third party collaborators, provided such sublicenses are consistent with the terms of our agreement. Santen has sole responsibility for funding, developing, seeking regulatory approval for and commercializing TRC105 products in the field of ophthalmology.

In consideration of the rights granted to Santen under the agreement, we received a one-time upfront fee of $10.0 million. In addition, we are eligible to receive up to a total of $155.0 million in milestone payments upon the achievement of certain milestones, of which $20.0 million relates to the initiation of certain development activities, $52.5 million relates to the submission of certain regulatory filings and receipt of certain regulatory approvals and $82.5 million relates to commercialization activities and the achievement of specified levels of product sales. If TRC105 products are successfully commercialized in the field of ophthalmology, Santen will be required to pay us tiered royalties on net sales ranging from high single digits to low teens, depending on the volume of sales, subject to adjustments in certain circumstances. In addition, Santen will reimburse us for all royalties due by us under certain third party agreements with respect to the use, manufacture or commercialization of TRC105 products in the field of ophthalmology by Santen and its affiliates and sublicensees. Royalties will continue on a country-by-country basis through the later of the expiration of our patent rights applicable to the TRC105 products in a given country or 12 years after the first commercial sale of the first TRC105 product commercially launched in such country.

Other License Agreements

As further described in the "Contractual Obligations and Commitments" section below, certain of our other license agreements have payment obligations that are contingent upon future events such as our achievement of specified development, regulatory and commercial milestones, and we may be required to make milestone payments and royalty payments in connection with the sale of products developed under these agreements. We do not currently have any significant ongoing annual payment obligations under these agreements.

Financial Operations Overview

Revenue

Our revenue to date has been derived solely from our March 2014 collaboration with Santen. The terms of this arrangement contain multiple deliverables, which include at inception: (1) a license to patents, information and know-how related to TRC105; (2) technology transfer; (3) collaboration, including technical and regulatory support provided by us; (4) manufacturing and supply obligations; and (5) shared CMC development activities. The license agreement provides that we may receive various types of payments, including an upfront payment, payment for various technical and regulatory support, payments for delivery of drug substance, reimbursement of certain development costs, milestone payments, and royalties on net product sales. In accordance with our revenue recognition policy described in detail below, we have identified one single unit of accounting for all the deliverables under the agreement and are recognizing revenue for the fixed or determinable collaboration consideration on a straight-line basis over the estimated development period.

We expect that any revenue we generate will fluctuate from quarter to quarter as a result of the timing of any future achievement of milestones and the extent to which any of our products are approved and successfully commercialized by us or Santen. If we or Santen fail to develop product candidates in a timely manner or obtain regulatory approval for them, our ability to generate future revenues, our results of operations and our financial position could be adversely affected.

Research and Development Expenses

Research and development expenses consist of costs associated with the preclinical and clinical development of our product candidates. These costs consist primarily of:

- salaries and employee-related expenses, including stock-based compensation and benefits for personnel in research and development functions;
- costs associated with conducting our preclinical, development and regulatory activities, including fees paid to third-party professional consultants, service providers and our scientific advisory board;
- costs incurred under clinical trial agreements with investigative sites;
- costs to acquire, develop and manufacture preclinical study and clinical trial materials;
- payments related to licensed products and technologies; and
- facilities, depreciation and other expenses, including allocated expenses for rent and maintenance of facilities.

Research and development costs, including third-party costs reimbursed by Santen as part of our collaboration, are expensed as incurred. We account for nonrefundable advance payments for goods and services that will be used in future research and development activities as expenses when the service has been performed or when the goods have been received.

The following table summarizes our research and development expenses by product candidate for the periods indicated:

	Years Ended December 31,		Nine Months Ended September 30,	
	2012	2013	2013	2014
			(unaudited)	
			(in thousands)	
Research and development expenses:				
Third-party research and development expenses:				
TRC105	$ 2,063	$ 3,941	$ 2,738	$ 3,129
TRC102	25	42	12	19
TRC205	—	—	—	38
Total third-party research and development expenses	2,088	3,983	2,750	3,186
Unallocated expenses	1,689	2,093	1,566	1,904
Total research and development expenses	$ 3,777	$ 6,076	$ 4,316	$ 5,090

Unallocated expenses consist primarily of our internal personnel costs, facility costs and scientific advisory board related expenses.

We plan to substantially increase our current level of research and development expenses for the foreseeable future as we: (1) continue Phase 2 development of TRC105 in our initial

oncology indications of soft tissue sarcoma, renal cell carcinoma and glioblastoma in combination with approved VEGF inhibitors, (2) expand the development program for TRC105 into large market oncology indications, (3) continue preclinical and initiate clinical development of TRC205 in fibrosis, and (4) contingent upon successful completion of Phase 2 development, initiate Phase 3 development of TRC105 in our initial oncology indications.

We cannot determine with certainty the timing of initiation, the duration or the completion costs of current or future preclinical studies and clinical trials of our product candidates due to the inherently unpredictable nature of preclinical and clinical development. Clinical and preclinical development timelines, the probability of success and development costs can differ materially from expectations. We anticipate that we will make determinations as to which product candidates to pursue and how much funding to direct to each product candidate on an ongoing basis in response to the results of ongoing and future preclinical studies and clinical trials, regulatory developments and our ongoing assessments as to each product candidate's commercial potential. We will need to raise substantial additional capital in the future. In addition, we cannot forecast which product candidates may be subject to future collaborations, when such arrangements will be secured, if at all, and to what degree such arrangements would affect our development plans and capital requirements.

The costs of clinical trials to us may vary significantly based on factors such as:

- the extent to which costs are borne by third parties such as NCI;
- per patient trial costs;
- the number of sites included in the trials;
- the countries in which the trials are conducted;
- the length of time required to enroll eligible patients;
- the number of patients that participate in the trials;
- the number of doses that patients receive;
- the drop-out or discontinuation rates of patients;
- potential additional safety monitoring or other studies requested by regulatory agencies;
- the duration of patient follow-up;
- the phase of development of the product candidate; and
- the efficacy and safety profile of the product candidate.

General and Administrative Expenses

General and administrative expenses consist primarily of salaries and related costs for employees in executive, finance and administration, corporate development and administrative support functions, including stock-based compensation expenses and benefits. Other significant general and administrative expenses include accounting and legal services, expenses associated with obtaining and maintaining patents, the cost of various consultants and occupancy costs.

We anticipate that our general and administrative expenses will substantially increase for the foreseeable future as we increase our headcount to support our continued research and development of our product candidates and the increased costs of operating as a public company. These increases will likely include increased costs related to the hiring of additional personnel and fees to outside consultants, lawyers and accountants, among other expenses. Additionally, we anticipate increased costs associated with being a public company, including

expenses related to services associated with maintaining compliance with NASDAQ listing rules and SEC requirements, insurance and investor relations related costs.

Other Income (Expense)

Other income (expense) primarily consists of changes in the fair value of preferred stock purchase rights that were fully settled in 2013 and changes in the fair value of preferred stock warrant liabilities related to warrants for the purchase of Series A redeemable convertible preferred stock. We do not expect any further fair value adjustments for these warrants subsequent to our initial public offering. In addition, other income (expense) includes interest charges related to our outstanding commercial bank debt.

Critical Accounting Policies and Significant Judgments and Estimates

Our management's discussion and analysis of financial condition and results of operations is based on our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States, or GAAP. The preparation of these 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 revenues and expenses during the reporting periods. These items are monitored and analyzed by us for changes in facts and circumstances, and material changes in these estimates could occur in the future. We base our estimates on our historical experience and on various other factors that we believe to be 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. Changes in estimates are reflected in reported results for the period in which they become known. Actual results may differ materially from these estimates under different assumptions or conditions.

While our significant accounting policies are more fully described in the notes to our financial statements appearing elsewhere in this prospectus, we believe that the following accounting policies related to revenue recognition, stock-based compensation and preferred stock warrant liabilities are most critical to understanding and evaluating our reported financial results.

Revenue Recognition

We recognize revenues when all four of the following criteria are met: (1) there is persuasive evidence that an arrangement exists; (2) delivery of the products and/or services has occurred; (3) the selling price is fixed or determinable; and (4) collectibility is reasonably assured. Amounts received prior to satisfying the revenue recognition criteria are recorded as deferred revenue in our balance sheets. Amounts expected to be recognized as revenue within the 12 months following the balance sheet date are classified as deferred revenue. Amounts not expected to be recognized as revenue within the 12 months following the balance sheet date are classified as long-term deferred revenue.

We evaluate multiple-element arrangements, such as our collaboration with Santen, to determine: (1) the deliverables included in the arrangement and (2) whether the individual deliverables represent separate units of accounting or whether they must be accounted for as a combined unit of accounting. This evaluation involves subjective determinations and requires us to make judgments about the individual deliverables and whether such deliverables are separable from the other aspects of the contractual relationship. Deliverables are considered separate units of accounting provided that: (a) the delivered items have value to the customer on a standalone basis and (b) if the arrangement includes a general right of return relative to the delivered items, delivery or performance of the undelivered items is considered probable and

substantially in our control. In assessing whether an item has standalone value, we consider factors such as the research, manufacturing and commercialization capabilities of the partner and the availability of the associated expertise in the general marketplace. In addition, we consider whether the partner can use the delivered items for their intended purpose without the receipt of the remaining elements, whether the value of the deliverable is dependent on the undelivered items and whether there are other vendors that can provide the undelivered elements.

Arrangement consideration that is fixed or determinable is allocated among the separate units of accounting using the relative selling price method. We use the following hierarchy of values to estimate the selling price of each deliverable: (1) vendor-specific objective evidence of fair value; (2) third-party evidence of selling price; and (3) best estimate of selling price, or BESP. The BESP reflects our best estimate of what the selling price would be if we regularly sold the deliverable on a standalone basis. Determining the BESP for a unit of accounting requires significant judgment. In developing the BESP for a unit of accounting, we consider applicable market conditions and relevant entity-specific factors, including factors that are contemplated in negotiating an arrangement and estimated costs. We validate the BESP for units of accounting by evaluating whether changes in the key assumptions used to determine the BESP will have a significant effect on the allocation of arrangement consideration between multiple units of accounting.

We then apply the applicable revenue recognition criteria to each of the separate units of accounting in determining the appropriate period and pattern of recognition. If there is no discernible pattern of performance and/or objectively measurable performance measures do not exist, then we recognize revenue under the arrangement on a straight-line basis over the period we expect to complete our performance obligations.

With respect to revenues derived from reimbursement of direct, out-of-pocket expenses for research and development costs associated with collaborations, where we act as a principal with discretion to choose suppliers, bear credit risk, and perform part of the services required in the transaction, we record revenue for the gross amount of the reimbursement. The costs associated with these reimbursements are reflected as a component of research and development expense in the statements of operations.

Milestones

We use the milestone method of accounting and revenue is recognized when earned, as evidenced by written acknowledgement from the collaborator or other persuasive evidence that the milestone has been achieved and the payment is non-refundable, provided that the milestone event is substantive. A milestone event is defined as an event (1) that can only be achieved based in whole or in part on either our performance or on the occurrence of a specific outcome resulting from our performance; (2) for which there is substantive uncertainty at the inception of the arrangement that the event will be achieved; and (3) that would result in additional payments being due to us. Events for which the occurrence is either contingent solely upon the passage of time or the result of a counterparty's performance are not considered to be milestone events. A milestone event is substantive if all of the following conditions are met: (a) the consideration is commensurate with either our performance to achieve the milestone, or the enhancement of the value to the delivered item(s) as a result of a specific outcome resulting from our performance to achieve the milestone; (b) the consideration relates solely to past performance; and (c) the consideration is reasonable relative to all the deliverables and payment terms (including other potential milestone consideration) within the arrangement. We assess whether a milestone is substantive at the inception of each arrangement. If a milestone is deemed non-substantive, we will account for that milestone payment in accordance with the

multiple element arrangements guidance and recognize it consistent with the related units of accounting for the arrangement over the related performance period.

Stock-Based Compensation

Stock-based compensation expense represents the grant date fair value of employee stock option grants recognized as expense over the requisite service period of the awards (usually the vesting period) on a straight-line basis, net of estimated forfeitures. We estimate the fair value of stock option grants using the Black-Scholes option pricing model. The Black-Scholes option pricing model requires the input of subjective assumptions, including the risk-free interest rate, the expected dividend yield of our common stock, the expected volatility of the price of our common stock and the expected term of the option. These estimates involve inherent uncertainties and the application of management's judgment. If factors change and different assumptions are used, our stock-based compensation expense could be materially different in the future. See Note 6 to our financial statements included elsewhere in this prospectus for information concerning certain of the specific assumptions we used in applying the Black-Scholes option pricing model to determine the estimated fair value of our employee stock options granted in 2012, 2013 and 2014.

The following table summarizes by grant date the number of shares of common stock underlying stock options granted from July 1, 2013 through the date of this prospectus and the associated per share exercise price and the estimated fair value per share of our common stock on the grant date:

Grant Date	Number of Common Shares Underlying Options Granted	Exercise Price per Common Share	Estimated Fair Value per Common Share
October 15, 2013	10,214	$ 1.47	$ 1.47
April 9, 2014	16,968	$ 2.63	$ 6.23
August 6, 2014	53,379	$ 6.23	$ 6.23
October 3, 2014	327,429	$ 7.04	$ 7.04

The following table summarizes the stock-based compensation expense recognized in our financial statements:

	Years Ended December 31,		Nine Months Ended September 30,	
	2012	2013	2013	2014
			(unaudited)	
	(in thousands)			
Research and development	$ 47	$ 184	$ 153	$ 112
General and administrative	11	91	74	43
Total stock-based compensation expense	$ 58	$ 275	$ 227	$ 155

As of December 31, 2013 and September 30, 2014, the unrecognized stock-based compensation expense related to outstanding employee stock options was $0.4 million and $0.5 million, respectively, and is expected to be recognized as expense over a weighted-average period of approximately 2.5 years and 2.7 years, respectively. The intrinsic value of all outstanding stock options as of September 30, 2014 was approximately $8.3 million, based on the assumed initial public offering price of $13.00 per share, of which approximately $5.1 million related to vested options and approximately $3.2 million related to unvested options.

Determination of the fair value of common stock

We are required to estimate the fair value of the common stock underlying our stock-based awards when performing fair value calculations, which is the most subjective input into the Black-Scholes option pricing model. The fair value of the common stock underlying our stock-based awards was determined on each grant date by our board of directors, taking into account input from management and independent third-party valuation analysis. All options to purchase shares of our common stock are intended to be granted with an exercise price per share no less than the fair value per share of our common stock underlying those options on the date of grant, based on the information known to us on the date of grant. In the absence of a public trading market for our common stock, on each grant date we develop an estimate of the fair value of our common stock in order to determine an exercise price for the option grants. Our determinations of the fair value of our common stock were made using methodologies, approaches and assumptions consistent with the American Institute of Certified Public Accountants *Audit and Accounting Practice Aid Series: Valuation of Privately Held Company Equity Securities Issued as Compensation*, or the Practice Aid.

Our board of directors considered various objective and subjective factors, along with input from management, to determine the fair value of our common stock, including:

- contemporaneous valuations of our common stock performed by independent third-party valuation specialists;
- our stage of development and business strategy, including the status of research and development efforts of our product candidates, and the material risks related to our business and industry;
- our results of operations and financial position, including our levels of available capital resources;
- the valuation of publicly traded companies in the life sciences and biotechnology sectors, as well as recently completed mergers and acquisitions of peer companies;
- the lack of marketability of our common stock as a private company;
- the prices of our redeemable convertible preferred stock sold to investors in arm's length transactions and the rights, preferences, and privileges of our redeemable convertible preferred stock relative to those of our common stock;
- the likelihood of achieving a liquidity event for the holders of our common stock, such as an initial public offering or a sale of our company, given prevailing market conditions;
- trends and developments in our industry;
- external market conditions affecting the life sciences and biotechnology industry sectors; and
- the composition of, and changes to, our management team and board of directors.

Common stock valuation methodologies and methods used to allocate our enterprise value to classes of securities

Our valuations were prepared in accordance with the guidelines in the Practice Aid, which prescribes several valuation approaches for setting the value of an enterprise, such as the cost, income and market approaches, and various methodologies for allocating the value of an enterprise to its common stock. The cost approach establishes the value of an enterprise based on the cost of reproducing or replacing the property less depreciation and functional or economic obsolescence, if present. The income approach establishes the value of an enterprise

based on the present value of future cash flows that are reasonably reflective of our company's future operations, discounting to the present value with an appropriate risk adjusted discount rate or capitalization rate. The market approach is based on the assumption that the value of an asset is equal to the value of a substitute asset with the same characteristics. Each valuation methodology was considered in our valuations. We utilized a backsolve market approach for each valuation in 2012 and 2013 and to determine the exercise price of stock options granted on April 9, 2014 based on the arm's length sales of our Series A redeemable convertible preferred stock.

In accordance with the Practice Aid, we considered the various methods for allocating the enterprise value across our classes and series of capital stock to determine the fair value of our common stock at each valuation date. Prior to our June 30, 2014 valuation, we concluded that the Option Pricing Method, or OPM, was most appropriate for each of the contemporaneous valuations of our common stock performed by independent third-party valuation specialists. We believed that the OPM was the most appropriate given the expectation of various potential liquidity outcomes and the difficulty of selecting and supporting appropriate enterprise values given our early stage of development. Under the OPM, shares are valued by creating a series of call options with exercise prices based on the liquidation preferences and conversion terms of each equity class. The values of the preferred and common stock are inferred by analyzing these options.

June 30, 2014 Valuation Report and Retrospective Reassessment of Fair Value

As part of the preparation of the financial statements necessary for inclusion in the registration statement related to this offering, we reassessed the fair value of our common stock on a retrospective basis for financial reporting purposes. For purposes of this reassessment, we relied in part on an appraisal of the value of our common stock as of June 30, 2014 that was prepared by an independent third-party valuation specialist using methodologies, approaches and assumptions consistent with the Practice Aid.

During the three months ended June 30, 2014, our board of directors first considered an initial public offering, which resulted in a change to both our expected time to a liquidity event and the nature of the expected liquidity event. As a result, the valuation method utilized for the June 30, 2014 valuation was changed to a hybrid OPM and Probability-Weighted Expected Return Method, or PWERM, in order to compensate for these factors. Under this hybrid method, we considered the expected initial public offering liquidity scenario, but also used a backsolve method to capture all other scenarios in the event a near-term initial public offering does not occur. To determine the enterprise value in the initial public offering liquidity scenario we utilized a market approach based on the pre-money valuations of recent biotechnology initial public offering transactions, and the enterprise value used in the OPM model was based on input from potential third-party investors in the company. The present value of our common stock under each scenario was then weighted based on the probability of each scenario occurring to determine the fair value of our common stock.

The June 30, 2014 valuation resulted in a common stock fair value of $6.23 per share. We concluded that the exercise price for the stock options granted during 2013 did not differ from their fair value at the date of grant. However, in light of the fact that our board of directors first considered an initial public offering in the second quarter of 2014, we applied the June 30, 2014 common stock fair value of $6.23 per share to the April 9, 2014 stock options granted at an exercise price of $2.63 per share to determine the stock-based compensation expense which is recorded in our financial statements.

For the common stock options granted on August 6, 2014, our board of directors determined that the fair value of our common stock was $6.23 per share, in consideration of the

valuation analysis as of June 30, 2014 and the other objective and subjective factors described above. As part of this determination, our board of directors concluded that no significant internal or external value-generating events had taken place between the June 30, 2014 and the August 6, 2014 grant date.

September 19, 2014 Valuation Report and October 3, 2014 Option Grants

In connection with the closing of our Series B financing, our board of directors elected to grant stock options to each of our employees and a non-employee director. As a result, options to purchase an aggregate of 327,429 shares of our common stock were granted on October 3, 2014. Our board of directors determined the fair value of our common stock on the date of grant based in part on an appraisal of the value of our common stock as of September 19, 2014 that was prepared by an independent third-party valuation specialist using methodologies, approaches and assumptions consistent with the Practice Aid. The valuation was prepared on substantially the same basis as our June 30, 2014 common stock valuation, with the exception of updated assumptions regarding the increased probability that we complete an initial public offering in the near-term and certain other assumptions regarding the timing, value and probability of other scenarios in the event a near-term initial public offering does not occur. The September 19, 2014 valuation resulted in the $7.04 fair value that was utilized for the option grants as our board of directors concluded that no significant internal or external value-generating events had taken place between the September 19, 2014 valuation report and the October 3, 2014 grant date. The fair value of $7.04 per common share represents only a 17% discount to the price of our Series B redeemable convertible preferred stock with rights, preferences and privileges superior to our common stock. Our Series B redeemable convertible preferred stock was issued in September 2014 for a price of approximately $2.19 per share (approximately $8.48 per share on an as converted basis) as a result of arm's length negotiations with third party investors.

Following the closing of this offering, our board of directors will determine the fair value of our common stock based on its closing price as reported on the date of grant on the primary stock exchange on which our common stock is traded.

Preferred Stock Warrant Liabilities

We classify freestanding warrants for the purchase of shares of our redeemable convertible preferred stock as liabilities on our balance sheets at their estimated fair value since the underlying redeemable convertible preferred stock has been classified as temporary equity. 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). We will continue to adjust the fair value of these warrants until the earlier of the exercise of the warrants or the time at which the underlying securities are no longer classified as temporary equity, including the completion of this offering. We estimate the fair values of the redeemable convertible preferred stock warrants using the Black-Scholes option pricing model based on inputs as of the valuation measurement dates for: the estimated fair value of the underlying redeemable convertible preferred stock; the remaining contractual terms of the warrants; the risk-free interest rates; the expected dividend yield and the estimated volatility of the price of the redeemable convertible preferred stock. The completion of this offering will result in the conversion of all of our redeemable convertible preferred stock into common stock and the warrants will become exercisable for shares of our common stock. Upon such conversion, the redeemable convertible preferred stock warrants will be classified as a component of stockholders' equity (deficit) and will no longer be subject to remeasurement.

Other Company Information

Net Operating Loss and Research and Development Tax Credit Carryforwards

At December 31, 2013, we had federal and California net operating loss, or NOL, carryforwards, each of approximately $17.2 million. The federal and California NOL carryforwards will begin expiring in 2029, unless previously utilized. At December 31, 2013, we had federal and California research and development credit carryforwards of approximately $0.5 million and $0.3 million, respectively. The federal research and development credit carryforwards will begin expiring in 2031, unless previously utilized. The California research and development credit carryforwards do not expire unless limited by Section 382 as discussed below.

Pursuant to Sections 382 and 383 of the Code, our annual use of our NOL and research and development credit carryforwards may be limited in the event that a cumulative change in ownership of more than 50% occurs within a three-year period. We completed a Section 382/383 analysis, regarding the limitation of our NOL and research and development credit carryforwards as of December 31, 2011. As a result of the analysis, an ownership change was determined to have occurred. We have excluded these tax attributes from our deferred tax assets with a corresponding reduction of the valuation allowance with no net effect on our income tax expense or our effective tax rate. Future ownership changes as a result of the closing of this offering and the concurrent private placement or subsequent shifts in our stock ownership may further limit our ability to utilize our remaining NOL and research and development tax credit carryforwards. As of December 31, 2013, we had a full valuation allowance against our deferred tax assets.

JOBS Act

On April 5, 2012, the JOBS Act was enacted. Section 107 of the JOBS Act provides that an "emerging growth company" can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards. In other words, an "emerging growth company" can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this extended transition period and, as a result, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

We are in the process of evaluating the benefits of relying on other exemptions and reduced reporting requirements provided by the JOBS Act. Subject to certain conditions set forth in the JOBS Act, as an "emerging growth company," we intend to rely on certain of these exemptions, including without limitation, (1) providing an auditor's attestation report on our system of internal controls over financial reporting pursuant to Section 404(b) of the Sarbanes-Oxley Act and (2) complying with any requirement that may be adopted by the Public Company Accounting Oversight Board regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements, known as the auditor discussion and analysis.

We will remain an "emerging growth company" until the earliest of (1) the last day of the fiscal year in which we have total annual gross revenues of $1 billion or more, (2) the last day of our fiscal year following the fifth anniversary of the date of the closing of this offering, (3) the date on which we have issued more than $1 billion in non-convertible debt during the previous three years or (4) the date on which we are deemed to be a large accelerated filer under the rules of the SEC with at least $700 million of outstanding equity securities held by non-affiliates.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standards Board, or FASB, issued Accounting Standards Update, or ASU, No. 2014-09, *Revenue from Contracts with Customers*, which converges the FASB and the International Accounting Standards Board standard on revenue recognition. Areas of revenue recognition that will be affected include, but are not limited to, transfer of control, variable consideration, allocation of transfer pricing, licenses, time value of money, contract costs and disclosures. This guidance is effective for the fiscal years and interim reporting periods beginning after December 15, 2016. We are currently evaluating the impact that the adoption of ASU 2014-09 will have on our financial statements and related disclosures.

In June 2014, the FASB issued ASU No. 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*. This ASU does the following among other things (1) eliminates the requirement to present inception-to-date information on the statements of income, cash flows, and stockholders' equity, (2) eliminates the need to label the financial statements as those of a development stage entity, (3) eliminates the need to disclose a description of the development stage activities in which the entity is engaged, and (4) amends FASB Accounting Standards Codification, or ASC, 275, *Risks and Uncertainties*, to clarify that information on risks and uncertainties for entities that have not commenced planned principal operations is required. The amendments in ASU No. 2014-10 related to the elimination of Topic 915 disclosures and the additional disclosure for Topic 275 are effective for public companies for annual and interim reporting periods beginning after December 15, 2014. We have early adopted this new guidance in our financial statements for the year ended December 31, 2013, and therefore have not labeled our financial statements as those of a development stage entity or included the previously required inception-to-date information.

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 relevant conditions, events and certain management plans that are known or reasonably knowable that when, considered in the aggregate, raise substantial doubt about the entity's ability to continue as a going concern within one year after the date that the financial statements are issued, for both annual and interim periods. ASU 2014-15 also requires certain disclosures around management's plans and evaluation, as well as the plans, if any, that are intended to mitigate those conditions or events that will alleviate the substantial doubt. ASU 2014-15 is effective for fiscal years ending after December 15, 2016. We are currently evaluating the impact that the adoption of ASU 2014-15 will have on our financial statements and related disclosures.

Results of Operations

Comparison of the Nine Months Ended September 30, 2013 and 2014

The following table summarizes our results of operations for the nine months ended September 30, 2013 and 2014:

	Nine Months Ended September 30,		Increase / (Decrease)
	2013	2014	
	(unaudited)		
	(in thousands)		
Collaboration revenue	$ —	$ 2,558	$ 2,558
Research and development expenses	4,316	5,090	774
General and administrative expenses	1,096	1,394	298
Other income (expense)	(84)	(334)	(250)

Collaboration revenue. Collaboration revenue was $0 and $2.6 million for the nine months ended September 30, 2013 and 2014, respectively. The increase in revenue was as a result of the collaboration we entered into with Santen in March 2014. Prior to our collaboration with Santen in 2014, we did not engage in any revenue generating activities.

Research and development expenses. Research and development expenses were $4.3 million and $5.1 million for the nine months ended September 30, 2013 and 2014, respectively. The increase of $0.8 million was due primarily to increased manufacturing, clinical sample analysis and other expenses related to TRC105, increased research and development headcount and salary and bonus increases in 2014.

General and administrative expenses. General and administrative expenses were $1.1 million and $1.4 million for the nine months ended September 30, 2013 and 2014, respectively. The increase of $0.3 million in our general and administrative expense was due primarily to increased legal expenses related to our licensing activities and salary and bonus increases in 2014.

Other income (expense). Other income (expense) was $(84,000) and $(334,000) for the nine months ended September 30, 2013 and 2014, respectively. The increase of $250,000 in other expense was primarily the result of interest expense related to the aggregate amount of $10.0 million we borrowed under our credit facility with SVB in November 2013, June 2014, and September 2014, offset by changes in the fair value of our preferred stock rights and preferred stock warrant liabilities.

Comparison of the Years Ended December 31, 2012 and 2013

The following table summarizes our results of operations for the years ended December 31, 2012 and 2013:

	Years Ended December 31,		Increase / (Decrease)
	2012	2013	
	(in thousands)		
Collaboration revenue	$ —	$ —	$ —
Research and development expenses	3,777	6,076	2,299
General and administrative expenses	1,449	1,484	35
Other income (expense)	298	(148)	(446)

Collaboration revenue. Prior to 2014, we did not engage in any revenue generating activities.

Research and development expenses. Research and development expenses were $3.8 million and $6.1 million for the years ended December 31, 2012 and 2013, respectively. The increase of $2.3 million was due primarily to manufacturing, clinical sample analysis and other expenses related to TRC105, personnel-related costs, consulting expense and stock-based compensation expense.

General and administrative expenses. General and administrative expenses were $1.4 million and $1.5 million for the years ended December 31, 2012 and 2013, respectively. The increase of $0.1 million was due primarily to increased general and administrative headcount offset by decreased legal fees associated with patent filings and decreased outside accounting and tax services in 2013.

Other income (expense). Other income (expense) was $0.3 million and $(0.1) million for the years ended December 31, 2012 and 2013, respectively. The decrease of $0.4 million in

other income was primarily the result of interest expense related to the $2.5 million we borrowed under our credit facility with SVB in November 2013 and the changes in fair value of our preferred stock purchase rights and preferred stock warrant liabilities.

Liquidity and Capital Resources

We have incurred losses and negative cash flows from operations since our inception, with the exception of the nine months ended September 30, 2014, when we received a $10.0 million one-time upfront payment in connection with our collaboration with Santen. As of September 30, 2014, we had an accumulated deficit of $31.6 million, and we expect to continue to incur net losses for the foreseeable future. As of September 30, 2014, we had cash in the amount of $39.2 million.

Sources of Liquidity

From our inception through September 30, 2014, we have funded our operations primarily with the aggregate net proceeds of $79.1 million from the private placement of redeemable convertible preferred stock and common stock, a $10.0 million one-time upfront fee received in connection with our collaboration with Santen and $10.0 million of commercial bank debt under our credit facility with SVB. In September 2014, we sold 12,400,274 shares of our Series B redeemable convertible preferred stock for net proceeds of approximately $25.7 million.

Credit Facility with SVB

In November 2013, we borrowed $2.5 million under a loan and security agreement with SVB, which we refer to as the SVB Loan. We were obligated to make interest-only payments through May 2014 and, beginning in June 2014, equal payments of principal and interest through the maturity date of August 1, 2016. The interest rate is a per annum fixed rate of 5.0%. The final payment due includes an additional fee of 7.0% of the loan amount, or $0.2 million. The SVB Loan is collateralized by all of our assets, other than our intellectual property, and contains customary events of default. In connection with the SVB Loan, we issued a warrant to purchase 37,500 shares of Series A redeemable convertible preferred stock at an exercise price of $2.00 per share. The warrant is fully exercisable and expires on November 14, 2023.

The SVB Loan contains customary conditions of borrowing, events of default and covenants, including covenants that restrict our ability to dispose of assets, merge with or acquire other entities, incur indebtedness and make distributions to holders of our capital stock. Should an event of default occur, including the occurrence of a material adverse change, we could be liable for immediate repayment of all obligations under the SVB Loan.

In June 2014, we entered into an amended loan and security agreement with SVB, which we refer to as the Amended SVB Loan. The amendment did not modify the repayment terms of the $2.5 million previously borrowed under the SVB Loan. The Amended SVB Loan provides us with a new $7.5 million growth capital loan facility, available to us in two advances at a per annum fixed interest rate of 4.5%. The first advance of $5.0 million was drawn in conjunction with securing the Amended SVB Loan in June 2014. The second advance of $2.5 million was drawn in September 2014. We are obligated to make interest-only payments on all outstanding advances under the Amended SVB Loan through November 30, 2014, and subsequently obligated to make monthly principal and interest payments to fully amortize the outstanding balance through the November 1, 2016 maturity date. The final payment due includes an additional fee of 9.0% of all growth capital advances and prepayment of loan amounts are subject to additional fees. In connection with the Amended SVB Loan, we issued a warrant to purchase 112,500 shares of Series A redeemable convertible preferred stock at an exercise price of $2.00 per share. The warrant is fully exercisable and expires on June 4, 2024.

Cash Flows

The following table summarizes our net cash flow activity for each of the periods set forth below:

	Years Ended December 31,		Nine Months Ended September 30,	
	2012	2013	2013	2014
			(unaudited)	
	(in thousands)			
Net cash provided by (used in):				
Operating activities	$ (5,431)	$ (6,670)	$ (4,784)	$ 4,925
Investing activities	(10)	(7)	(5)	(41)
Financing activities	3,974	6,494	3,994	32,047
Net (decrease) increase in cash	$ (1,467)	$ (183)	$ (795)	$ 36,931

Operating activities. Net cash used in operating activities was $5.4 million and $6.7 million for the years ended December 31, 2012 and 2013, respectively, and $4.8 million for the nine months ended September 30, 2013. The net cash used in operating activities in each of these periods was primarily due to our net losses and changes in our accounts payable and accrued expense accounts. Net cash provided by operating activities during the nine months ended September 30, 2014 was $4.9 million and was primarily the result of $7.7 million of deferred revenue related to the $10.0 million one-time upfront payment received in conjunction with our collaboration with Santen, offset by our net loss for the period.

Investing activities. Net cash used in investing activities was due to property and equipment purchases in each period.

Financing activities. Net cash provided by financing activities was $4.0 million and $6.5 million for the years ended December 31, 2012 and 2013, respectively. Net cash provided by financing activities during the year ended December 31, 2012 resulted from our sale of Series A redeemable convertible preferred stock. Net cash provided by financing activities during the year ended December 31, 2013 was a result of $4.0 million of net proceeds from our sale of Series A redeemable convertible preferred stock and the $2.5 million of proceeds from our SVB Loan. Net cash provided by financing activities was $4.0 million for the nine months ended September 30, 2013 and was a result of the net proceeds from our sale of Series A redeemable convertible preferred stock. Net cash provided by financing activities was $32.0 million for the nine months ended September 30, 2014 and was a result of $25.7 million of net proceeds from our sale of Series B redeemable convertible preferred stock in September 2014, net borrowings from our credit facility with SVB and costs paid in connection with our initial public offering contemplated by this prospectus.

Funding Requirements

As of September 30, 2014, we had cash in the amount of $39.2 million. We estimate that our net proceeds from this offering and the concurrent private placement will be approximately $45.0 million, based upon the assumed initial public offering price of $13.00 per share, and after deducting the estimated underwriting discounts and commissions, estimated placement agent fees and estimated offering expenses payable by us. Because we have not entered into any definitive agreements with NEA related to the concurrent private placement, there can be no guarantee that the concurrent private placement will take place or that the terms of the concurrent private placement will be consistent with those assumed in this prospectus. We

believe that our existing cash as of September 30, 2014 and the estimated net proceeds from this offering, together with interest thereon, will be sufficient to meet our anticipated cash requirements for at least the next 18 months. However, our forecast of the period of time through which our financial resources will be adequate to support our operations is a forward-looking statement that involves risks and uncertainties, and actual results could vary materially.

Our future capital requirements are difficult to forecast and will depend on many factors, including:

- our ability to enter into and maintain our collaborations, including our collaboration with Santen;
- our ability to achieve, and our obligations to make, milestone payments under our collaboration and license agreements;
- our ability to initiate, and the progress and results of, our planned clinical trials of TRC105;
- Santen's ability to initiate, and the progress and results of, Santen's planned clinical trials of DE-122;
- the scope, progress, results and costs of preclinical development, and clinical trials of our other product candidates;
- the costs, timing and outcome of regulatory review of our product candidates;
- the revenue, if any, received from commercial sales of our product candidates for which we or any of our partners, including Santen, may receive marketing approval;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims;
- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution, for any of our product candidates for which we receive marketing approval and do not partner for commercialization; and
- the extent to which we acquire or in-license other products and technologies.

Until we can generate substantial product revenues, if ever, we expect to finance our cash needs through a combination of equity offerings, debt financings, collaborations, collaborations and licensing arrangements.

Contractual Obligations and Commitments

The following table summarizes our contractual obligations at December 31, 2013:

	Total	Payments Due by Period: Less than 1 Year	1-3 Years	3-5 Years	More than 5 Years
		(in thousands)			
Long-term debt obligations, including interest and final payment[1]	$ 2,878	$ 740	$ 2,138	$ —	$ —
Operating lease obligations[2]	416	102	267	47	—
Total[3]	$ 3,294	$ 842	$ 2,405	$ 47	$ —

(1) Amounts do not include the $5.0 million and $2.5 million borrowed in June 2014 and September 2014, respectively, under the Amended SVB Loan. We will make principal and interest payments to SVB with respect to these draws of $0.4 million in 2014, $3.9 million in 2015 and $4.3 million in 2016.

(2) Our operating lease obligations relate to our corporate headquarters in San Diego, California. We lease 3,548 square feet of office space under an operating lease that expires in April 2017. Amounts do not include the impact of the September 2014 amendment to our operating lease that expanded leased space to 5,034 square feet. Our total future minimum payments under the agreement increased by approximately $0.2 million and the April 2017 expiration date of the lease was unchanged.

(3) Amounts do not include the $150,000 payable to Tufts Medical Center in connection with the Sponsored Research Agreement executed in December 2014.

Under each of our license agreements we may have payment obligations that are contingent upon future events such as our achievement of specified development, regulatory and commercial milestones and are required to make development milestone payments and royalty payments in connection with the sale of products developed under these agreements. We do not have any significant ongoing annual payment obligations under these license agreements. As of December 31, 2013, we were unable to estimate the timing or likelihood of achieving the milestones or making future product sales and, therefore, any related payments are not included in the table above. These commitments include the following:

- Under our license agreement with Health Research Inc. and Roswell Park Cancer Institute, referred to collectively as RPCI, we may be required to pay up to an aggregate of approximately $6.4 million ($0.4 million of which we have already paid) upon the achievement of certain milestones for products utilizing certain intellectual property licensed from RPCI, or the RPCI Technology, including TRC105, of which approximately $1.4 million ($0.4 million of which we have already paid) relates to the initiation of certain development activities and $5.0 million relates to certain regulatory filings and approvals. We may also be required to pay up to an aggregate of approximately $6.4 million upon the achievement of certain milestones for products utilizing a patent owned by us covering humanized anti-endoglin antibodies, including TRC205, of which approximately $1.4 million relates to the initiation of certain development activities and $5.0 million relates to certain regulatory filings and approvals. Upon commercialization, we will be required to pay RPCI mid single-digit royalties based on net sales of products utilizing the RPCI Technology in each calendar quarter, subject to adjustments in certain circumstances. In addition, we will be required to pay RPCI low single-digit royalties based on net sales in each calendar quarter of products utilizing our patent covering humanized anti-endoglin antibodies. Our royalty obligations continue until the expiration of the last valid claim in a patent subject to the agreement, which we expect to occur in 2029, based on the patents currently subject to the agreement.

- Under our license agreement with Case Western, we may be required to pay up to an aggregate of approximately $9.8 million in milestone payments, of which $650,000 relates to the initiation of certain development activities and approximately $9.1 million relates to the

submission of certain regulatory filings and receipt of certain regulatory approvals. If products utilizing certain intellectual property licensed from Case Western, or the TRC102 Technology, are successfully commercialized, we will be required to pay Case Western a single-digit royalty on net sales, subject to adjustments in certain circumstances. Beginning on the earlier of a specified number of years from the effective date of the agreement and the anniversary of the effective date following the occurrence of a specified event, we will be required to make a minimum annual royalty payment of $75,000, which will be credited against our royalty obligations. In the event we sublicense any of our rights under the agreement relating to the TRC102 Technology, we will be obligated to pay Case Western a portion of certain fees we may receive under the sublicense. Our royalty obligations will continue on a country-by-country basis through the later of the expiration of the last valid claim under the TRC102 Technology or 14 years after the first commercial sale of a product utilizing the TRC102 Technology in a given country.

- Under our license agreement with Lonza, we are required to pay Lonza a low single-digit percentage royalty on the net selling price of TRC105 product manufactured by Lonza. In the event that we or a strategic partner or collaborator manufactures the product, we will be required to pay Lonza an annual lump sum payment of £75,000, along with a low single-digit percentage royalty on the net selling price of the manufactured TRC105 product. In the event that we sublicense our manufacturing rights under the agreement (other than to a strategic partner or collaborator), we will be obligated to pay Lonza an annual lump sum payment of £300,000 per sublicense, along with a low single-digit percentage royalty on the net selling price of the manufactured TRC105 product. If, on a country-by-country basis, the manufacture or sale of the TRC105 product is not protected by a valid claim in a licensed patent, our royalty obligations in such country will decrease and will expire 12 years after the first commercial sale of the product.

We enter into contracts in the normal course of business with clinical trial sites and clinical supply manufacturing organizations and with vendors for preclinical safety and research studies, research supplies and other services and products for operating purposes. These contracts generally provide for termination on notice, and therefore are cancelable contracts and not included in the table of contractual obligations and commitments.

Off-Balance Sheet Arrangements

During the periods presented we did not have, nor do we currently have, any off-balance sheet arrangements as defined under the applicable rules of the SEC.

Quantitative and Qualitative Disclosures about Market Risk

Interest Rate Risk

Our cash and cash equivalents consist of cash and a money market fund. We do not hold any short-term investments. As a result, the fair value of our portfolio is relatively insensitive to interest rate changes. Our long-term debt bears interest at a fixed rate.

Foreign Currency Exchange Risk

We incur significant expenses, including for manufacturing of clinical trial materials, outside the United States based on contractual obligations denominated in currencies other than the U.S. dollar, including Pounds Sterling. At the end of each reporting period, these liabilities are converted to U.S. dollars at the then-applicable foreign exchange rate. As a result, our business is affected by fluctuations in exchange rates between the U.S. dollar and foreign currencies. We do not enter into foreign currency hedging transactions to mitigate our exposure to foreign currency exchange risks. Exchange rate fluctuations may adversely affect our

expenses, results of operations, financial position and cash flows. However, to date, these fluctuations have not been significant. Based on our purchase commitments for fiscal 2014, a movement of 10% in the U.S. dollar to Pounds Sterling exchange rate would not have a material effect on our results of operations or financial condition.

Effects of Inflation

Inflation generally affects us by increasing our cost of labor and clinical trial costs. We do not believe that inflation has had a material effect on our results of operations or financial condition during the periods presented.

BUSINESS

Overview

We are a clinical stage biopharmaceutical company focused on the development and commercialization of novel targeted therapeutics for cancer, age-related macular degeneration, or AMD, and fibrotic diseases. We are a leader in the field of endoglin biology and are using our expertise to develop antibodies that bind to the endoglin receptor. Endoglin is essential to angiogenesis, the process of new blood vessel formation, and a key contributor to the development of fibrosis, or tissue scarring. Our lead product candidate, TRC105, is an anti-endoglin antibody that is being developed for the treatment of multiple solid tumor types in combination with inhibitors of the vascular endothelial growth factor, or VEGF, pathway. The VEGF pathway regulates vascular development in the embryo, or vasculogenesis, and angiogenesis. TRC105 has been studied in six completed Phase 2 clinical trials and three completed Phase 1 clinical trials, and is currently being studied in four Phase 2 clinical trials. We expect topline data in all of these ongoing clinical trials by late 2015 to mid 2016 and, if results are positive, we expect to initiate Phase 3 clinical trials for one or more initial indications of soft tissue sarcoma, renal cell carcinoma, glioblastoma, an aggressive form of brain cancer, and hepatocellular carcinoma by the end of 2016.

We believe treatment with TRC105 in combination with VEGF inhibitors may improve survival in cancer patients when compared to treatment with a VEGF inhibitor alone. In initial clinical trials of more than 300 patients, TRC105 has shown good tolerability and promising anti-tumor activity, particularly in combination with VEGF inhibitors. In a Phase 1/2 clinical trial of TRC105 with Avastin (bevacizumab), a large molecule VEGF inhibitor, that primarily enrolled patients with colorectal and ovarian cancer whose cancer had progressed on prior Avastin treatment the combination demonstrated anti-tumor activity. Specifically, of 25 evaluable patients treated previously with VEGF inhibitors, 16 patients (64%) had stable disease, of whom 10 patients (40%) had partial responses. Six responding patients treated with prior VEGF inhibitors (24%) remained without cancer progression longer than during their prior VEGF inhibitor therapy, and were therefore considered to have durable responses. TRC105 has also been administered with the VEGF inhibitors Nexavar (sorafenib), Votrient (pazopanib) and Inlyta (axitinib) in three ongoing clinical trials. In the ascending dose portion of a Phase 2 clinical trial of TRC105 with Inlyta in patients with renal cell carcinoma, 10 of 17 patients (59%) demonstrated partial responses. In the ascending dose portion of a Phase 2 clinical trial of TRC105 with Nexavar in patients with hepatocellular carcinoma, three of the 13 patients (23%) treated at recommended Phase 2 doses of TRC105 (10 mg/kg or 15 mg/kg) demonstrated partial responses, in a setting where the expected partial response rate of Nexavar alone is 2%. In the ascending dose portion of a Phase 2 clinical trial of TRC105 with Votrient, several patients have demonstrated tumor reductions, and a patient with angiosarcoma has an ongoing complete response to treatment.

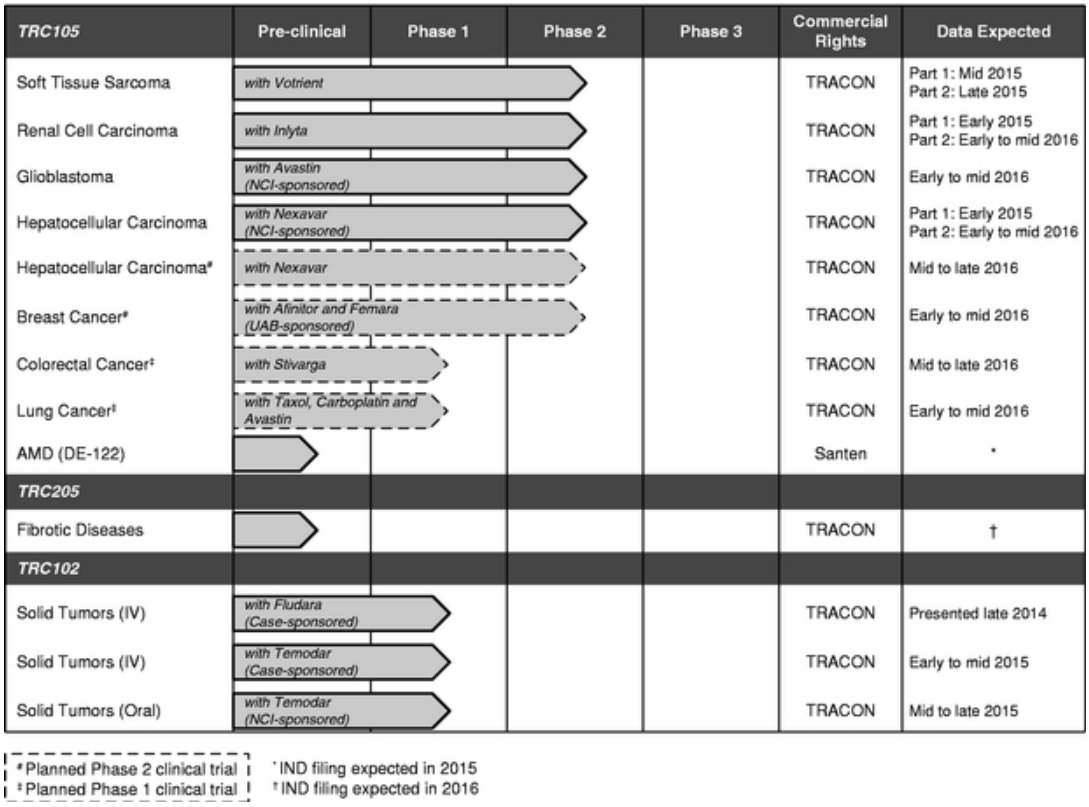
Our other anti-endoglin antibody is TRC205, which is in preclinical development for the treatment of fibrotic diseases. We are also developing TRC102, a small molecule that is in clinical development for the treatment of lung cancer and glioblastoma.

We operate a clinical development model that emphasizes capital efficiency. Our experienced clinical operations and regulatory affairs groups enable us to eliminate the cost associated with hiring contract research organizations to manage clinical, regulatory and database aspects of our Phase 1 and Phase 2 clinical trials. We have also collaborated with the National Cancer Institute, or NCI, which has selected TRC105 and TRC102 for federal funding of clinical development, as well as Case Western Reserve University, or Case Western. Under these collaborations, NCI has sponsored or is sponsoring seven completed or ongoing clinical trials of TRC105 and TRC102, and Case Western is sponsoring two ongoing clinical trials of TRC102. If

merited by Phase 2 data, we expect to fund initial Phase 3 clinical trials of TRC105, and, based on NCI's past course of conduct with similarly situated pharmaceutical companies in which it has sponsored pivotal clinical trials following receipt of positive Phase 2 data, we expect that Phase 3 clinical trials of TRC105 in additional indications will be sponsored by NCI.

In March 2014, Santen Pharmaceutical Co., Ltd., or Santen, a global ophthalmology company, licensed from us exclusive worldwide rights to develop and commercialize our anti-endoglin antibodies, including TRC105 and TRC205, for ophthalmology indications, including AMD. We retain global rights to develop and commercialize our anti-endoglin antibodies outside of the field of ophthalmology, as well as global rights to TRC102 in all indications.

The following chart summarizes key information regarding ongoing and planned development of our product candidate pipeline:



We are developing TRC105 for use in combination with agents that inhibit angiogenesis by targeting the VEGF pathway. VEGF, like endoglin, is required for angiogenesis. While multiple VEGF inhibitors have been approved and have achieved commercial success, nearly all cancer patients develop resistance to this class of treatment and many do not respond at the onset. Targeting endoglin concurrently with the VEGF pathway has been shown to improve angiogenesis inhibition and the treatment of cancer in preclinical models. TRC105 binds to the endoglin receptor at a precise location to inhibit endothelial cell activation and angiogenesis. Certain manufacturers of approved VEGF inhibitors that we are studying in combination with TRC105 have agreed to supply their drug at no cost for use in the applicable clinical trials.

TRC105 is being studied in combination with VEGF inhibitors in four ongoing Phase 2 clinical trials for oncology indications, including soft tissue sarcoma, renal cell carcinoma, glioblastoma and hepatocellular carcinoma. We consider these initial indications attractive because the endpoints for regulatory approval may be attained more quickly than the endpoints for other indications. We also expect that these initial indications would be for the same lines of treatment for which the companion VEGF inhibitor is approved. We were previously in late-stage negotiations with a large pharmaceutical company to license them the rights to develop and commercialize TRC105 in the field of oncology (including an option for us to co-develop and co-commercialize in the United States), but in light of our Series B financing, we elected not to pursue the license and to retain our global rights to TRC105 in the field of oncology.

We have produced formulations of TRC105 for development in ophthalmology, which are initially being developed for the treatment of wet AMD, the leading cause of blindness in the Western world. In March 2014, Santen licensed from us exclusive worldwide rights to develop and commercialize our anti-endoglin antibodies, including TRC105, for ophthalmology indications. We retain global rights to develop our anti-endoglin antibodies outside of the field of ophthalmology. Santen is expected to file an Investigational New Drug application, or IND, for the development of TRC105 for ophthalmology indications under the name DE-122.

TRC205, a humanized, deimmunized anti-endoglin antibody, is being developed for the treatment of fibrotic diseases. Diseases characterized by fibrosis, the harmful buildup of excessive fibrous tissue leading to scarring and ultimately organ failure, include nonalcoholic steatohepatitis, or NASH, idiopathic pulmonary fibrosis, or IPF, renal fibrosis, cardiac fibrosis and scleroderma. Preclinical and clinical data demonstrated increased endoglin expression in patients with heart failure and showed that inhibiting endoglin reduced cardiac fibrosis, preserved heart function and improved survival in mouse models of heart failure. Subsequent preclinical research in mouse models indicated that antibodies to endoglin inhibit cardiac and liver fibrosis. Although initial findings indicate endoglin's importance in cardiac and liver fibrosis, we believe these findings may also be applicable to other fibrotic diseases, including NASH, IPF, myelofibrosis and other indications.

TRC102 is a small molecule inhibitor of DNA repair intended to reverse resistance to chemotherapy, including the agents used in the treatment of lung cancer and glioblastoma. We have completed a Phase 1 clinical trial of TRC102 in combination with Alimta (pemetrexed), a chemotherapy drug approved for the treatment of lung cancer and mesothelioma. Patients who received TRC102 and Alimta demonstrated reduction in tumor masses, including partial response, and lung cancer patients with squamous histology, a tumor type resistant to Alimta treatment, demonstrated stable disease. TRC102 is currently being studied in combination with the approved chemotherapy drugs Temodar (temozolomide) and Fludara (fludarabine) in Phase 1 clinical trials sponsored by Case Western. NCI has selected TRC102 for federal funding of clinical development and is conducting a Phase 1 clinical trial of oral TRC102 with Temodar in patients with advanced treatment-resistant tumors. We expect NCI to sponsor a Phase 1/2 clinical trial of TRC102 with Temodar in patients with glioblastoma, a Phase 1 clinical trial of TRC102 with Alimta and cisplatin in patients with mesothelioma, a Phase 1 clinical trial of TRC102 with chemotherapy and radiation therapy in lung cancer and a Phase 2 clinical trial of TRC102 with Alimta in patients with lung cancer. We retain global rights to develop TRC102, and, based on correspondence with NCI in June 2014, we expect that development of TRC102 through Phase 2 clinical trials will be completed with NCI funding. If merited by Phase 2 data, we expect to fund initial Phase 3 clinical trials and, based on NCI's past course of conduct with similarly situated pharmaceutical companies in which it has sponsored pivotal clinical trials following receipt of positive Phase 2 data, we expect that Phase 3 clinical trials in additional indications will be sponsored by NCI.

Our experienced clinical operations and regulatory affairs groups are responsible for significant aspects of our clinical trials, including site monitoring, regulatory compliance, database management and clinical study report preparation. We use this internal resource to eliminate the cost associated with hiring contract research organizations, or CROs, to manage clinical, regulatory and database aspects of the Phase 1 and Phase 2 clinical trials that we sponsor in the United States. In our experience, this model has resulted in capital efficiencies and improved communication with clinical trial sites, which expedite patient enrollment and access to patient data as compared to a CRO-managed model, and we plan to leverage this capital efficient model for future product development.

We expect to seek orphan drug designation for TRC105 for the treatment of soft tissue sarcoma and glioblastoma and for TRC102 for the treatment of glioblastoma and mesothelioma. If granted, orphan drug designation may provide financial incentives, such as opportunities for grant funding towards clinical trial costs, tax advantages and U.S. Food and Drug Administration, or FDA, user-fee waivers, as well as the potential for a period of market exclusivity. In addition, we intend to seek expedited review through FDA Fast Track designation for all of our eligible product candidates, which is a process designed to facilitate the development and expedite the FDA's review of drugs to treat serious conditions and fill unmet medical needs. However, there is no guarantee that we will receive these designations or the related potential benefits. For example, even if we do receive Fast Track designation, we may not experience a faster development process, review or approval compared to conventional FDA procedures.

Our Strategy

Our goal is to be a leader in the development of targeted therapies for patients with cancer and other diseases of high unmet medical need. As key components of our strategy, we intend to:

- ***Focus clinical development of TRC105 on initial oncology indications with potential reduced time to regulatory approval.*** We plan to continue Phase 2 development of TRC105 in combination with approved VEGF inhibitors in our initial oncology indications of soft tissue sarcoma, renal cell carcinoma, glioblastoma and hepatocellular carcinoma, each of which is associated with reduced time to achieve the endpoints necessary for regulatory approval, with the goal of being ready to initiate one or more Phase 3 clinical trials by the end of 2016. The FDA has granted approval for drugs in soft tissue sarcoma and renal cell carcinoma based on progression-free survival, or the time a patient lived without the cancer progressing, rather than overall survival. A progression-free survival endpoint can be achieved sooner than an overall survival endpoint, thereby reducing the time to complete clinical trials and submit applications for regulatory approval. Although the endpoint for approval for glioblastoma and hepatocellular carcinoma is overall survival, this endpoint is reached sooner for glioblastoma and hepatocellular carcinoma than for many other solid tumors.

- ***Expand development program for TRC105 into large market oncology indications.*** To maximize the commercial opportunity of TRC105, we intend to continue developing TRC105 in additional oncology indications with large patient populations. For example, based on existing data combining TRC105 with small molecule inhibitors of the VEGF pathway, we plan to initiate Phase 1 development of TRC105 in colorectal cancer, in combination with Stivarga (regorafenib). We also plan to initiate Phase 1 development of TRC105 in lung cancer with chemotherapy and Avastin and Phase 2 development of TRC105 with Afinitor (everolimus) and Femara (letrozole) in breast cancer. Finally, based on existing data from the dose escalation portion of a trial combining TRC105 and Nexavar, we plan to expand Phase 2 development of TRC105 and Nexavar in patients with hepatocellular carcinoma.

- ***Continue to leverage our collaborative relationship with NCI to accelerate and broaden development of TRC105 and TRC102.*** Our collaboration with NCI allows us to pursue more indications with our assets than we would otherwise be able to pursue on our own. We anticipate that NCI will complete ongoing Phase 2 clinical trials of TRC105 and may initiate other Phase 2 clinical trials in addition to the Phase 2 clinical trials of TRC105 that we are sponsoring. Based on correspondence with NCI in June 2014, we expect that Phase 2 clinical trials of TRC102 will be completed with NCI funding. If merited by Phase 2 data, we expect to fund initial Phase 3 clinical trials of TRC105 and TRC102 and, based on NCI's past course of conduct with similarly situated pharmaceutical companies in which it has sponsored pivotal clinical trials following receipt of positive Phase 2 data, we anticipate that NCI will sponsor Phase 3 clinical trials in additional indications.

- ***Support Santen during preclinical development to advance DE-122 into clinical trials in wet AMD.*** We are using our expertise in the development of anti-endoglin antibodies to assist Santen in the manufacture and preclinical testing of DE-122, and we expect Santen will file an IND for the development of TRC105 for ophthalmology indications and begin clinical testing of DE-122 in wet AMD in 2015.

- ***Continue preclinical studies and initiate clinical development of TRC205 in fibrotic diseases.*** TRC205, a humanized and deimmunized anti-endoglin antibody, is our lead product candidate for the treatment of fibrotic diseases, including NASH and IPF, each of which presents a large commercial opportunity. We expect to be able to file an IND to initiate clinical development of TRC205 in one or more fibrotic disease indications in 2016.

- ***Leverage internal capabilities to advance other programs efficiently and cost effectively through clinical development.*** We have assembled a management team that has contributed to the approval of seven therapeutics, including VEGF inhibitors in cancer and in AMD, and that has core competencies relating to clinical operations and regulatory affairs. We expect to continue to benefit from these capabilities through the development of additional early and mid-stage product candidates, both from internal programs and potential in-licensed programs.

Rationale for Developing Anti-Endoglin Antibodies to Treat Cancer, AMD and Fibrotic Diseases

We focus on developing antibodies that target the endoglin receptor. Endoglin is a protein that is overexpressed on endothelial cells, the cells that line the interior surface of blood vessels, when they experience hypoxia, which is a condition characterized by inadequate oxygen supply. Endoglin allows endothelial cells to proliferate in a hypoxic environment and is required for angiogenesis. These properties render endoglin an attractive target for the treatment of diseases that require angiogenesis, including cancer and AMD, especially in combination with VEGF inhibitors. Endoglin is also expressed on fibroblasts, the cells that mediate fibrosis, and is a key contributor to the development of fibrosis. Inhibiting endoglin limits transforming growth factor beta, or TGF-b, signaling and production of fibrotic proteins by human cardiac fibroblasts. Anti-endoglin antibodies inhibit fibrosis in mouse models of cardiac and liver fibrosis.

Inhibiting Angiogenesis to Limit Tumor Growth and Treat AMD

The progressive growth of solid cancers to clinically recognized sizes requires angiogenesis. Similarly, abnormal angiogenesis causes wet AMD. Thus, inhibition of angiogenesis is an effective strategy for the treatment of cancer and wet AMD.

Therapies that inhibit angiogenesis are attractive for multiple reasons:

- Except for ovulation and wound healing, angiogenesis in adults is generally not necessary or desirable and otherwise only occurs in connection with an abnormal process such as tumor growth or choroidal neovascularization, the process of angiogenesis that causes wet AMD.
- Treatments that interrupt tumor angiogenesis may inhibit the growth of many solid cancers.
- Angiogenic targets are present either in the plasma or on the surface of endothelial cells, and therefore are readily accessible to antibody treatments, in contrast to targets expressed within tumors that are more difficult for antibodies to access.
- Angiogenic targets on endothelial cells are less prone to genetic mutation than targets expressed by genetically unstable cancer cells. As a result, development of resistance may be more predictable for agents that target endothelial cell functions than for those targeting cancer cells.

Success and Limitations of VEGF Inhibitors

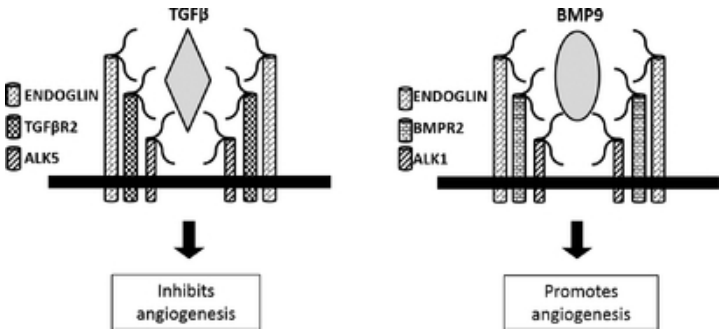
Several anti-angiogenesis therapies that inhibit the VEGF pathway are currently marketed for the treatment of cancer. The VEGF inhibitor Avastin significantly prolongs overall survival for patients with advanced colorectal cancer and lung cancer when added to chemotherapy regimens. Avastin is also an approved therapy for glioblastoma, renal cell carcinoma, and ovarian cancer. Zaltrap (ziv-aflibercept) and Cyramza, other VEGF inhibitors, are approved for the treatment of colorectal cancer and gastric cancer, respectively, and orally available small molecule VEGF inhibitors, including Sutent (sunitinib malate), Nexavar, Votrient, Stivarga and Inlyta, have been shown to prolong survival in patients with metastatic soft tissue sarcoma, renal cell carcinoma, hepatocellular carcinoma, neuroendocrine cancer and colorectal cancer. Despite the clinical and commercial success of anti-angiogenesis agents that primarily target the VEGF pathway, nearly all cancer patients develop resistance to this class of treatment and many do not respond at the onset. According to current research, resistance to anti-angiogenic agents occurs through the emergence of escape pathways rather than by acquired mutations to the VEGF receptor or its ligand. We believe that the endoglin pathway serves as the dominant escape pathway that allows continued angiogenesis despite inhibition of the VEGF pathway. Specifically, inhibition of the VEGF pathway causes hypoxia, which in turn increases endoglin expression, allowing continued angiogenesis through the endoglin pathway despite inhibition of the VEGF pathway.

The Endoglin Pathway

Endoglin modulates signaling of receptor complexes of the TGF-b protein family. Endoglin participates in signal transduction mediated by TGF-b and bone morphogenic proteins, or BMP. Endoglin serves two functions through its expression on endothelial cells: binding of TGF-b to endoglin reinforces a static state in the endothelium, while binding of BMP to endoglin activates the endothelial cells and promotes angiogenesis.

As illustrated in the figure below, the binding of TGF-b to endoglin, as part of a receptor complex that includes activin receptor-like kinase 5, or ALK5, and TGF-bR2, a member of the TGF-b receptor family, causes activation of intracellular proteins that reinforce a static state in the endothelium, as shown on the left. Binding of BMP to endoglin, as part of a receptor complex that includes ALK1 and BMPR2, a member of the BMP receptor family, on proliferating endothelium activates proteins that override growth inhibition stimulated by TGF-b binding to endothelium, and allows organized endothelial proliferation, as shown on the right.

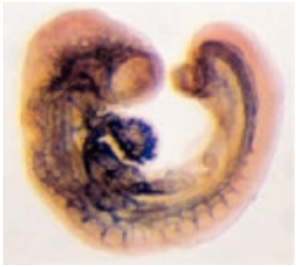
Inhibition and proliferation of endothelial cells through the endoglin pathway



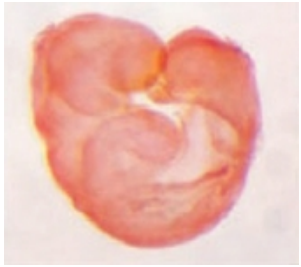
Targeted inactivation of endoglin results in defective vascular development. In a preclinical study, mice embryos lacking endoglin died from the absence of angiogenesis by day 11.5. The figure below depicts anti-endoglin immunostains of mice embryos at day 8.5. The mouse embryo on the upper left is a normal mouse embryo, with endoglin expression indicated by black staining. The mouse embryo on the upper right had both copies of the endoglin gene inactivated, and a lack of endoglin expression is indicated by the absence of black staining. Photomicrographs of the mice embryos at day 10.5 show developed vasculature in normal mice (bottom left) and pockets of red blood cells without discernible vessels in endoglin-deficient mice (bottom right).

Targeted inactivation of mouse endoglin resulting in defective vascular development

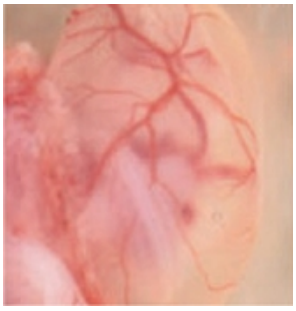
Normal Mouse—Day 8.5



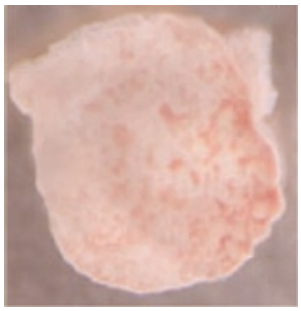
Endoglin-Deficient Mouse—Day 8.5



Normal Mouse—Day 10.5



Endoglin-Deficient Mouse—Day 10.5



Endoglin has also been shown to be critical for normal blood vessel development in humans. For example, the inheritance of one normal copy and one abnormal copy of the endoglin gene results in diminished endoglin function and causes Osler-Weber-Rendu syndrome, a rare disease characterized by dilated small blood vessels of the skin and mucosal surfaces that cause nosebleeds, typically beginning in the second decade of life. Compared to patients with a normal complement of endoglin genes, patients with Osler-Weber-Rendu syndrome have improved overall cancer survival, with a reported 31% reduced risk of death following cancer diagnosis, after controlling for known prognostic factors.

Endoglin is highly overexpressed on the membrane of proliferating endothelial cells in tumor vessels. A high level of endoglin expression has been associated with poor prognosis in patients with substantially all solid tumor types, including the following:

- Breast cancer
- Colorectal cancer
- Endometrial cancer
- Esophageal cancer
- Gastric cancer
- Glioblastoma
- Head and neck cancer
- Hepatocellular carcinoma
- Lung cancer
- Ovarian cancer
- Prostate cancer
- Renal cell carcinoma
- Soft tissue sarcoma

Targeting the Endoglin Pathway to Address Limitations of VEGF Inhibitors

Preclinical studies indicate that endoglin expression promotes resistance to inhibition of the VEGF pathway, suggesting that targeting the endoglin pathway in addition to the VEGF pathway is a more effective means to inhibit angiogenesis in tumors than targeting the VEGF pathway alone, particularly given the frequent development of resistance to VEGF inhibitors. For example, in a preclinical model of human pancreatic cancer, endoglin expression within tumors increased following treatment with a VEGF inhibitor. Further studies indicated that TGF-b, which inhibits angiogenesis in the endothelium, was the most highly overexpressed protein (over 16-fold increased expression, whereas no other protein was more than four-fold elevated) in pancreatic cancers from mice treated with a VEGF inhibitor. As discussed above, BMP binding to endoglin overrides the negative effects of elevated TGF-b caused by VEGF inhibition. Unlike the endoglin pathway, many angiogenic pathways were not affected by VEGF inhibition, indicating that these pathways are unlikely to mediate escape from VEGF inhibition. Proteins that were not elevated included the angiopoietins, a family of angiogenic factors that are distinct from endoglin and VEGF. Consistent with this observation, therapies targeting the angiopoietins have not demonstrated anti-tumor activity when combined with VEGF inhibitors in clinical trials.

We believe the endoglin pathway serves as the dominant escape pathway that allows continued angiogenesis despite inhibition of the VEGF pathway. In support of this hypothesis, researchers analyzed blood vessels from human bladder cancers implanted in mice following VEGF inhibitor treatment. Data indicated that endoglin-expressing vessels persisted at the tumor periphery and increased within the core of the tumor, allowing continued tumor growth despite treatment with a large molecule VEGF inhibitor. In another preclinical study, mice with a predisposition to develop tumors were bred to have only one normal copy, rather than two normal copies, of the endoglin gene. Tumors in mice with two normal copies of the endoglin gene exhibited resistance to large and small molecule VEGF inhibitors. This resistance was not observed in the mice where endoglin function was inhibited by deleting one copy of the endoglin gene. Likewise, mice in which both copies of the endoglin gene were deleted in endothelial cells developed smaller lung tumors following treatment with a small molecule VEGF inhibitor, as compared to mice with normal levels of endoglin. In these models, VEGF inhibitors demonstrated anti-tumor activity only following inhibition of the endoglin pathway. These results illustrate the therapeutic utility of targeting both angiogenic pathways concurrently for the treatment of cancer.

BMP has been identified as a key endoglin ligand that binds to the endoglin receptor to promote angiogenesis. Therefore, it is a rational drug development strategy to target the receptor with an antibody that binds more tightly to endoglin at the BMP binding site than BMP itself, thereby preventing BMP from activating endothelial cells. TRC105 is a novel human chimeric immunoglobulin G subclass 1 antibody, or IgG1, that binds to endoglin with high affinity and inhibits BMP binding to endoglin, thereby inhibiting endothelial cell activation. As expected, studies have shown that anti-endoglin antibodies that do not bind at the BMP binding site do not inhibit angiogenesis in preclinical models.

We believe that a combination of VEGF and endoglin inhibitors may have application in wet AMD as well as a number of oncology indications where VEGF inhibitors are currently approved by regulatory authorities. Tumor types for which VEGF inhibitors have been approved include colorectal cancer, gastrointestinal stromal tumor, glioblastoma, hepatocellular carcinoma, lung cancer, neuroendocrine tumors, renal cell carcinoma, soft tissue sarcoma, ovarian cancer and thyroid cancer.

Anti-Angiogenesis VEGF Inhibitors in Oncology Indications

Cancer is the second leading cause of death in the Western world and may affect any organ in the human body. Localized cancer is generally treated and cured with surgery. However, metastatic cancer that has spread beyond the location where it started is generally incurable. Metastatic cancer is treated with chemotherapeutics or targeted agents that specifically inhibit pathways implicated in tumor growth or angiogenesis.

There are several FDA-approved anti-angiogenesis drugs that inhibit the VEGF pathway, with over $10.0 billion in reported aggregate worldwide sales in oncology in 2013. VEGF inhibitors are approved in the following oncology indications, among others:

- *Soft Tissue Sarcoma:* The American Cancer Society, or the ACS, estimates there were approximately 11,000 new cases of soft tissue sarcoma in the United States in 2013 with more than 4,000 deaths. Localized tumors are curable, but patients with metastatic disease have a median survival of approximately 12 months following diagnosis. Standard systemic chemotherapy regimens are poorly tolerated and of limited usefulness with response rates of approximately 20% to 30%. Votrient, a small molecule VEGF inhibitor, was approved in the United States for the second line treatment of soft tissue sarcoma in 2013.

- *Renal Cell Carcinoma.* The ACS estimates there were 65,150 new cases of renal cell carcinoma in the United States in 2013 with 13,680 deaths. Sutent, Nexavar and Votrient are small molecule VEGF inhibitors approved as single agents for the first line treatment of advanced or metastatic renal cell carcinoma, Inlyta is a small molecule VEGF inhibitor approved for second line treatment, and Avastin is approved with interferon. Inlyta was approved in 2012 for the treatment of renal cell carcinoma, with reported global sales of $319 million in 2013, compared to $100 million in 2012.

- *Glioblastoma:* Glioblastoma represents one of the highest unmet needs in oncology. Glioblastoma is the most common and most lethal malignant brain cancer in adults. The Central Brain Tumor Registry of the United States estimates that there are about 12,000 new cases diagnosed each year in the United States. The median survival following diagnosis is reported to be approximately 14 months. Avastin has been approved in the United States for the second line treatment of glioblastoma following cancer progression on prior therapy.

- *Hepatocellular Carcinoma.* The ACS estimates there were 30,640 new cases of hepatocellular carcinoma in the United States in 2013 with 21,670 deaths. The only drug

approved in the United States for the first line treatment of hepatocellular carcinoma is the VEGF inhibitor Nexavar. In 2013, reported global sales of Nexavar were $1.0 billion worldwide.

- *Colorectal Cancer.* The ACS estimates there were 142,820 new cases of colon cancer or rectal cancer in the United States in 2013 with 50,830 deaths. Avastin is approved with chemotherapy for the first and second line treatment of patients with metastatic colorectal cancer, and Zaltrap is approved with chemotherapy for the second line treatment of patients with metastatic colorectal cancer.

- *Non-Small Cell Lung Cancer.* The ACS estimates there were 228,190 new cases of lung cancer in the United States in 2013 with 159,480 deaths. Avastin is approved for the first line treatment of patients with locally advanced, recurrent, or metastatic non-squamous non-small cell lung cancer, in combination with chemotherapy.

TRC105 Development in Oncology

Clinical Development Overview

TRC105 is our investigational novel human chimeric IgG1 monoclonal antibody that is currently being studied with dosing weekly or every two weeks by intravenous, or IV, infusion. Commercialized chimeric antibodies include Rituxan (rituximab), Erbitux (cetuximab) and Adcetris (brentuximab vedotin), which collectively had reported global sales of over $8.0 billion in 2013. TRC105 is in four ongoing clinical trials in combination with VEGF inhibitors and has been studied in nine completed clinical trials as a single agent or with VEGF inhibitors.

The following table summarizes certain key information regarding our clinical trials of TRC105 in cancer patients:

Ongoing Clinical Trials of TRC105

Phase	Indication	Sponsor	Companion Treatment	Design (Number of Patients)
2*	Soft tissue sarcoma	TRACON	Votrient	Single arm (81)
2*	Clear cell renal cell carcinoma	TRACON	Inlyta	Randomized (168)
2*	Glioblastoma	NCI	Avastin	Randomized (98)
2*	Hepatocellular carcinoma	NCI	Nexavar	Dose escalation portion and single arm portion (42 total)

Planned Clinical Trials of TRC105

Phase	Indication	Sponsor	Companion Treatment	Design (Number of Patients)
2	Breast cancer	UAB	Afinitor and Femara	Single arm (38 total)
2	Hepatocellular carcinoma	TRACON	Nexavar	Dose escalation portion and single arm portion (41 total)
1	Colorectal cancer	TRACON	Stivarga	Dose escalation (18)
1	Lung cancer	TRACON	Taxol, Carboplatin and Avastin	Dose escalation (18)

Completed Clinical Trials of TRC105

Phase	Indication	Sponsor	Companion Treatment	Design (Number of Patients)
1	Solid tumors	TRACON	None	Dose escalation (50)
1/2	Solid tumors	TRACON	Avastin	Dose escalation portion and single arm portion (38 total)
2	Glioblastoma	TRACON	Avastin	Single arm (22)
1	Breast cancer	TRACON	Xeloda	Dose escalation (19)
1	Prostate cancer	NCI	None	Dose escalation (21)
2	Bladder cancer	NCI	None	Single arm (13)
2	Hepatocellular carcinoma	NCI	None	Single arm (11)
2	Ovarian cancer	TRACON	None	Single arm (23)
2	Renal cell carcinoma (all histologies)	NCI	Avastin	Randomized (62)**

* Each of these trials was designed with a Phase 1 open-label portion, which demonstrated that the recommended single agent dose of TRC105 can be administered in combination with the approved dose of the companion VEGF inhibitor.

** This trial was designed to randomize 88 patients, but enrollment was closed following the accrual of 62 patients after an interim analysis concluded that the trial was unlikely to achieve the primary endpoint. Patients who were already enrolled are continuing treatment.

The collective clinical data support the development of TRC105 in combination with VEGF inhibitors rather than development as a single agent. To date, TRC105 has primarily been studied in the last line treatment setting, where patients tend to be resistant to additional treatments, but ongoing development focuses on the treatment of cancer patients with TRC105 and VEGF inhibitors in the first and second line treatment settings, where increased susceptibility to anti-angiogenic treatment is expected.

Consistent with preclinical data indicating improved anti-cancer activity following concurrent inhibition of the endoglin and VEGF pathways, TRC105 has shown good tolerability and promising anti-tumor activity in combination with large and small molecule inhibitors of the VEGF pathway. In a Phase 1/2 clinical trial of TRC105 with Avastin that primarily enrolled patients with colorectal and ovarian cancer whose cancer had progressed on prior Avastin treatment, the combination demonstrated anti-tumor activity in advanced cancer patients whose cancer had progressed on prior Avastin treatment. Specifically, of 25 evaluable patients treated previously with VEGF inhibitors, 16 patients (64%) had stable disease, of whom 10 patients (40%) had partial responses. Six responding patients treated with prior VEGF inhibitors (24%) remained without cancer progression longer than during their prior VEGF inhibitor therapy, and were therefore considered to have durable responses. TRC105 has also been administered with the VEGF inhibitors Nexavar, Votrient and Inlyta in three ongoing clinical trials. In the ascending dose portion of a Phase 2 clinical trial of TRC105 with Inlyta in patients with renal cell carcinoma, 10 of 17 patients (59%) demonstrated partial responses. In the ascending dose portion of a Phase 2 clinical trial of TRC105 with Nexavar in patients with hepatocellular carcinoma, three of the 13 patients (23%) treated at recommended Phase 2 doses of TRC105 (10 mg/kg or 15 mg/kg) demonstrated partial responses, in a setting where the expected partial response rate of Nexavar alone is 2%. In the ascending dose portion of a Phase 2 clinical trial of TRC105 with Votrient, several patients have demonstrated tumor reductions, and a patient with angiosarcoma has an ongoing complete response to treatment.

Clinical trials of TRC105 as a single agent in patients whose cancer had progressed on multiple prior therapies indicated limited single agent activity in treatment-resistant patients with prostate cancer, metastatic bladder cancer, advanced or metastatic hepatocellular

carcinoma, glioblastoma and ovarian cancer. However, single agent activity, as evidenced by progression-free survival greater than 18 months or partial response, was achieved in individual treatment-resistant patients with soft tissue sarcoma, hepatocellular carcinoma and prostate cancer.

Ongoing Phase 2 clinical trials assess the activity of TRC105 with a particular VEGF inhibitor in patients who have not previously been treated with that particular VEGF inhibitor. In general, it is more difficult to resensitize a patient whose cancer has already progressed on a prior VEGF inhibitor than it is to prevent resistance in a patient who has not previously been treated with that VEGF inhibitor. In addition, cancer progresses rapidly in some patients following treatment with a VEGF inhibitor, to the point that these patients are unavailable for subsequent therapy. Thus, we believe the greatest potential for TRC105 will be in combination with VEGF inhibitors prior to the development of resistance to VEGF inhibitors.

Ongoing Clinical Trials of TRC105

Phase 2 Clinical Trial of TRC105 with Inlyta in Patients with Clear Cell Renal Cell Carcinoma

We are conducting a two-part Phase 2 clinical trial of TRC105 in combination with Inlyta, an approved VEGF inhibitor, in patients with advanced or metastatic renal cell carcinoma. We have completed enrollment of Part 1 of the trial, which is being conducted at five sites in the United States and enrolled 18 patients. Three patients were initially enrolled at an 8 mg/kg TRC105 dose level and three patients were initially enrolled at a 10 mg/kg TRC105 dose level to demonstrate that the recommended single agent dose of TRC105 of 10 mg/kg was well tolerated when administered with the approved single agent dose of Inlyta. Twelve additional patients were then enrolled at the 10 mg/kg TRC105 dose level with the approved single agent dose of Inlyta.

We believe that preliminary data from Part 1 of this trial are encouraging, and we will present these data at the Genitourinary Cancers Symposium of the American Society of Clinical Oncology conference in February 2015. Based on a Phase 3 trial of Inlyta, the expected median progression-free survival of patients with clear cell renal cell carcinoma treated with Inlyta who have progressed following treatment with only one prior inhibitor of the VEGF pathway is 4.8 months. The progression-free survival of patients enrolled in Part 1 of our trial of TRC105 with Inlyta, all of whom failed at least one prior inhibitor of the VEGF pathway, has been 6.9 months, and in patients with clear cell renal cell carcinoma, has been 7.9 months. The best overall response as of January 13, 2015 for the 17 patients who have been followed for at least two months in Part 1 of the trial is described below. Percentage decreases in tumor size are reported relative to the baseline measurement at the beginning of the study.

- Five patients had tumor reductions that qualified as partial responses according to Response Evaluation Criteria in Solid Tumors 1.1, or RECIST 1.1, a response criteria initially developed to assess the activity of chemotherapy. All patients had cancer progression following treatment with at least one small molecule VEGF inhibitor and four patients were treated in the fourth line setting. Two patients also progressed following treatment with Opdivo (nivolumab), an antibody directed at the programmed cell death 1 receptor (PD-1). One of these patients, whose previous best response was stable disease with the VEGF inhibitor Votrient, following which cancer progression was documented, and also had cancer progression on interleukin-2 and Opdivo, remained on trial for 14 months with a partial response as assessed by RECIST 1.1. The second patient, whose previous best response was stable disease with the VEGF inhibitor Sutent, then demonstrated cancer progression after three months of treatment with Votrient as well as cancer progression on Opdivo, was ongoing treatment at month 9 in our trial with a partial response as assessed by RECIST 1.1. The third patient, whose previous best

response was stable disease with the VEGF inhibitor Sutent, following which cancer progression was documented, and who also progressed following treatment with Afinitor, a drug approved for the treatment of renal cell carcinoma that inhibits a metabolic pathway, achieved a partial response as assessed by RECIST 1.1 and was ongoing treatment at month 10 of our trial. The fourth patient, whose previous best response was stable disease with the VEGF inhibitor Sutent, following which cancer progression was documented, achieved a partial response as assessed by RECIST 1.1 and is ongoing at month 10 of our trial. The fifth patient, whose previous best response was stable disease with the VEGF inhibitor Sutent, who also was treated with the VEGF inhibitor Votrient, following which cancer progression was documented, achieved a partial response as assessed by RECIST 1.1 and is ongoing at month 9 of our trial.

- Ten patients had tumor reductions that qualified as partial responses as assessed by the Choi criteria described above, including the five patients with partial responses as assessed by RECIST 1.1. Choi criteria are response criteria developed at the University of Texas MD Anderson Cancer Center to evaluate the activity of angiogenesis inhibitors. Choi criteria have been shown to correlate more strongly with progression-free survival and overall survival than RECIST 1.1 in several clinical trials of angiogenesis inhibitors. Progression-free survival is the anticipated endpoint for Phase 3 clinical trials in patients with soft tissue sarcoma and renal cell carcinoma. All patients had cancer progression following prior treatment with at least one small molecule VEGF inhibitor and seven remained in the trial, including one patient ongoing at month 13 in our trial.

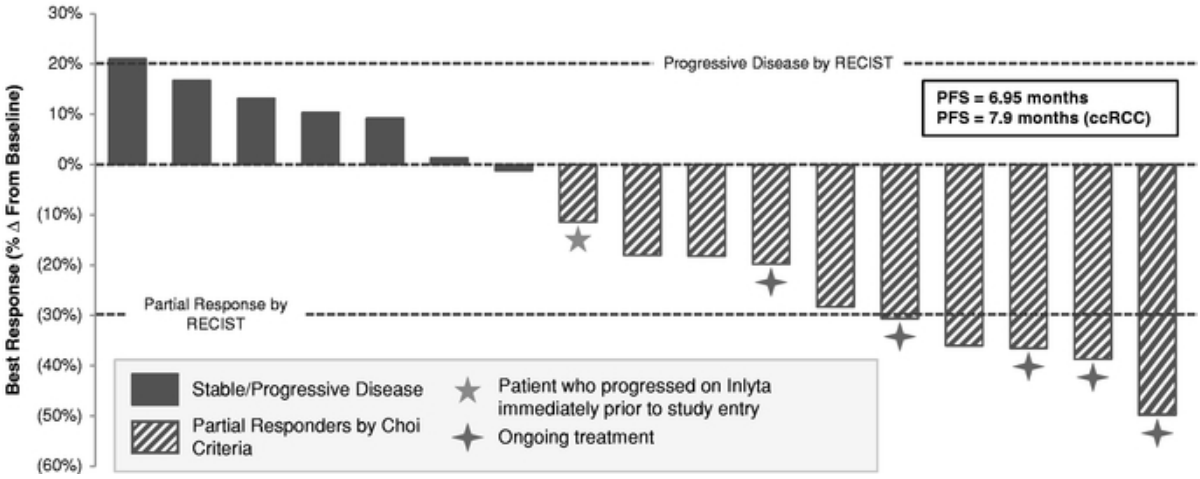
- Three patients had stable disease.

- Four patients had cancer progression within two months following initiation of treatment.

- Improved anti-tumor activity was noted in patients with clear cell renal cell carcinoma, the most common type of renal cell carcinoma, which is noted to be more responsive to treatment with angiogenesis inhibitors. Eight of 12 patients with clear cell histology demonstrated partial responses as assessed by Choi criteria, including four partial responses as assessed by RECIST 1.1.

The best response by maximum percent change decrease in tumor lesion size of each of 17 patients enrolled in the trial with measureable disease who underwent efficacy assessment is noted in the figure below.

Maximum percentage change in target lesion size in renal cell carcinoma patients treated with TRC105 and Inlyta



Based on the tolerability and anti-tumor activity observed in Part 1 of the trial, Part 2 of the trial began enrollment in November 2014 and is expected to enroll 150 advanced clear cell renal cell carcinoma patients at approximately 20 sites in the United States to compare TRC105 at 10 mg/kg in combination with Inlyta to Inlyta alone. The patients are randomly allocated in equal numbers to the two treatment arms, and the primary endpoint of Part 2 of the trial is progression-free survival as assessed by RECIST 1.1. If successful, Part 2 of the trial would support initiation of a Phase 3 clinical trial.

Phase 2 Clinical Trial of TRC105 with Votrient in Patients with Soft Tissue Sarcoma

We are conducting a two-part Phase 2 clinical trial of TRC105 in combination with Votrient, an approved VEGF inhibitor, in patients with soft tissue sarcoma. Part 1 of the trial has completed enrollment of 18 evaluable patients. Three patients were initially enrolled at an 8 mg/kg TRC105 dose level and three patients were initially enrolled at a 10 mg/kg TRC105 dose level to demonstrate that the recommended single agent dose of TRC105 of 10 mg/kg was well tolerated with the approved single agent dose of Votrient. We have enrolled ten additional patients at the 10 mg/kg TRC105 dose level with the approved single agent dose of Votrient. We believe that preliminary data from this trial are encouraging.

As of December 1, 2014, 18 patients in Part 1 of the trial had undergone efficacy assessments. All three patients dosed with TRC105 at 8 mg/kg with the approved dose of Votrient had stable disease and remained in the trial for at least six months of treatment, including one patient with synovial sarcoma who had a 27% decrease in tumor burden as assessed by RECIST 1.1 four months after initiating treatment and another patient with ongoing stable disease for 10 months of treatment. Thirteen of 15 patients dosed at the recommended single agent doses of both drugs had a best response of stable disease by RECIST 1.1, of whom nine remain on treatment, some for as many as seven months. One of these patients, with angiosarcoma, has an ongoing complete response at month 4 of treatment. We expect to present these data at the American Society of Clinical Oncology conference in June 2015.

Based on the tolerability and anti-tumor activity observed to date, Part 2 of the trial began enrollment in September 2014. Part 2 of the study will accrue patients at approximately eight sites in the United States and, as of December 1, 2014, had enrolled 16 of the expected 63 patients with soft tissue sarcoma. The primary endpoint of Part 2 of the trial is progression-free survival as assessed by RECIST 1.1, and a key secondary endpoint is overall response rate. We

expect to correlate progression-free survival and overall response rate with endoglin expression on sarcoma tissue to assess whether direct endoglin expression on sarcoma cells may serve as a biomarker that identifies responsive sarcoma subtypes. We expect to have topline data from Part 1 of the trial in mid 2015 and from Part 2 of the trial in late 2015. If data from the Phase 2 clinical trial indicate endoglin expression on sarcoma cells is predictive of TRC105 activity, a Phase 3 clinical trial may incorporate a biomarker strategy to identify expression of endoglin on sarcoma tissue as a basis for enrollment of more responsive patients into the trial.

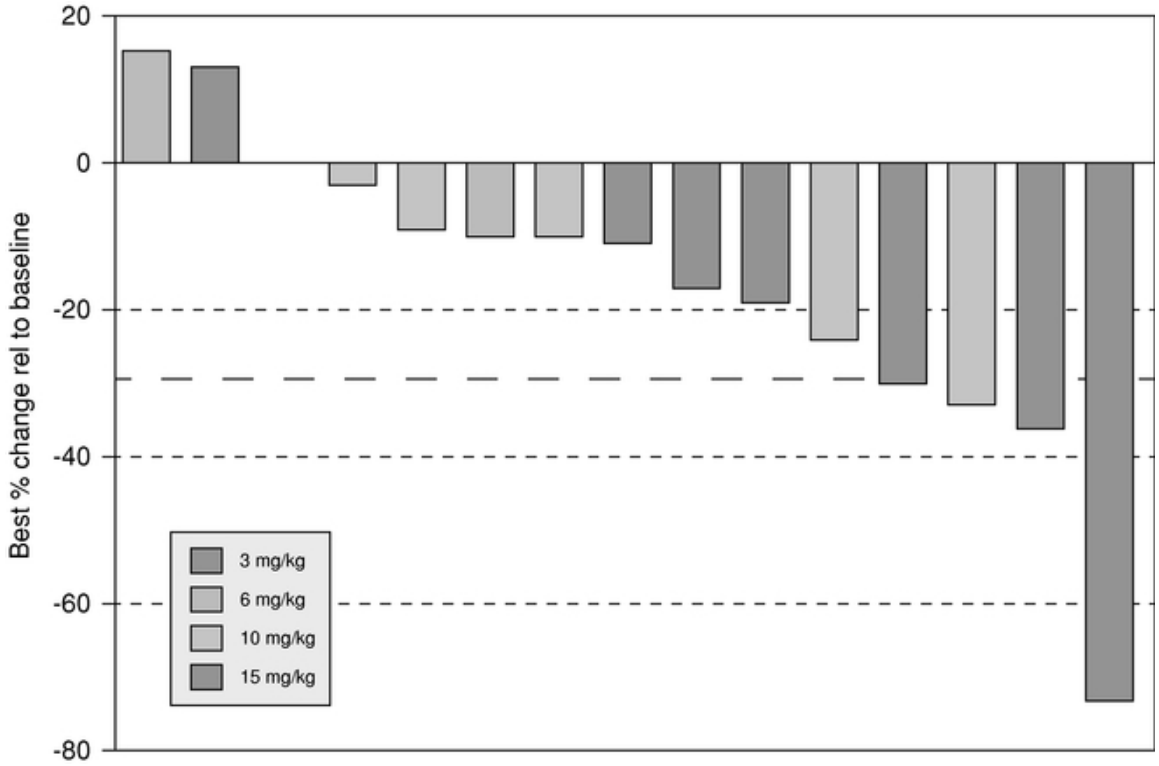
Phase 2 Randomized Clinical Trial of TRC105 with Avastin in Patients with Glioblastoma

NCI is sponsoring a two-part Phase 2 clinical trial in patients with glioblastoma that includes more than 50 sites in the United States. Part 1 of the trial was a dose escalation study of TRC105 in combination with Avastin in 12 patients and completed enrollment in January 2014. In Part 2 of the trial, 86 glioblastoma patients who have received chemotherapy or radiation therapy and have not been treated previously with Avastin or another VEGF inhibitor are expected to be randomized in equal proportions to receive TRC105 and Avastin or Avastin alone. Enrollment into Part 2 of the trial began in the third quarter of 2014, and 16 patients were enrolled in Part 2 of the trial as of December 10, 2014. The primary endpoint is progression-free survival, and we expect that NCI will have topline data in early to mid 2016.

Phase 2 Clinical Trial of TRC105 with Nexavar in Patients with Hepatocellular Carcinoma

NCI is conducting a two-part Phase 2 clinical trial of TRC105 in combination with Nexavar, an approved VEGF inhibitor, in 42 patients with hepatocellular carcinoma. Part 1 of the trial was completed following the enrollment of 20 patients with hepatocellular carcinoma, 15 of which were evaluable by RECIST 1.1, and Part 2 of the trial was initiated in the third quarter of 2014 and is expected to enroll up to 23 patients. Part 1 of the trial was designed as an ascending dose trial with an expansion stage with the primary endpoint of evaluating the safety and tolerability of 3, 6, 10 and 15 mg/kg TRC105 every two weeks in combination with the approved dose of Nexavar to select a dose level of TRC105 (in combination with Nexavar) for further study if merited. Data reported at the Gastrointestinal Cancer Symposium of the American Society of Clinical Oncology in January 2014 and in January 2015 indicated that TRC105 was well tolerated at all doses tested (3, 6, 10 and 15 mg/kg) in combination with approved doses of Nexavar. As shown in the figure below, anti-tumor activity was noted, including reductions in tumor burden in the majority of treated patients, and partial response in three patients, as assessed by RECIST 1.1. Durable activity was noted in one ongoing patient who remained on treatment for 22 months. The partial responses as assessed by RECIST 1.1 occurred in three of the 13 patients (23%) treated at recommended Phase 2 doses of TRC105 (10 mg/kg or 15 mg/kg), in a setting where the expected partial response rate of Nexavar alone is 2%. The primary endpoint of Part 2 of the trial is overall response rate as assessed by RECIST 1.1.

Maximum percentage change in target lesion size in hepatocellular carcinoma patients treated with TRC105 and Nexavar



Planned Clinical Trials of TRC105

Phase 2 Clinical Trial of TRC105 with Nexavar in Patients with Hepatocellular Carcinoma

We are planning a two-part Phase 2 clinical trial of TRC105 in combination with Nexavar, which is approved for the treatment of hepatocellular carcinoma, in patients with advanced or metastatic hepatocellular carcinoma. Prior completed clinical trials indicated that 15 mg/kg of TRC105 given every two weeks was well tolerated in combination with approved doses of Nexavar. Part 1 of the trial will determine whether the recommended Phase 2 dose of TRC105 of 10 mg/kg given weekly can be administered safely concurrently with Nexavar. Part 2 of the trial is expected to enroll up to 23 patients with advanced or metastatic hepatocellular carcinoma to determine the overall response rate, progression-free survival and overall survival following treatment with the recommended Phase 2 dose of TRC105 of 10 mg/kg given concurrently with Nexavar.

Phase 1 Clinical Trial of TRC105 with Taxol, carboplatin and Avastin in Patients with Lung Cancer

We are planning a Phase 1 clinical trial of TRC105 in combination with Taxol, carboplatin and Avastin for the initial treatment of advanced or metastatic non-squamous non-small cell lung cancer. The combination of Taxol, carboplatin and Avastin is approved for the initial treatment of advanced or metastatic non-squamous non-small cell lung cancer, and the combination of Taxol and Avastin is approved for the treatment of ovarian cancer. Prior completed trials indicated the recommended Phase 2 dose of 10 mg/kg of TRC105 was well tolerated with Avastin. The primary endpoint of the trial is to determine whether the recommended Phase 2 dose of TRC105 of 10 mg/kg can be administered safely concurrently with Taxol, carboplatin and Avastin. Up to

15 patients are expected to be treated with the recommended Phase 2 dose of TRC105 of 10 mg/kg given concurrently with Taxol, carboplatin and Avastin. Secondary endpoints include pharmacokinetics, overall response rate by RECIST 1.1, progression-free survival and overall survival.

Phase 1 Clinical Trial of TRC105 with Stivarga in Patients with Colorectal Cancer

We are planning a Phase 1 clinical trial of TRC105 in combination with Stivarga, a small molecule inhibitor of the VEGF pathway approved for the last line treatment of colorectal cancer, in patients with advanced or metastatic colorectal cancer. The primary endpoint of the trial is to determine whether the recommended Phase 2 dose of TRC105 of 10 mg/kg can be administered safely concurrently with Stivarga. Up to 15 patients are expected to be treated with the recommended Phase 2 dose of TRC105 of 10 mg/kg given concurrently with Stivarga. Secondary endpoints include pharmacokinetics, overall response rate by RECIST 1.1, progression-free survival and overall survival.

Phase 2 Clinical Trial of TRC105 with Afinitor and Femara in Postmenopausal Women with Newly Diagnosed Local or Locally Advanced Potentially Resectable Hormone-Receptor Positive and Her-2 Negative Breast Cancer

We are planning a two-part Phase 2 clinical trial of TRC105 as a neoadjuvant in combination with Afinitor and Femara, each of which is approved for the treatment of breast cancer in a study sponsored by the University of Alabama, Birmingham Cancer Center, or UAB. The trial is expected to enroll patients with locally advanced breast cancer who will receive TRC105 in combination with Afinitor and Femara prior to surgical removal of the tumor. Part 1 of the trial is expected to enroll up to 18 patients to determine whether the recommended Phase 2 dose of TRC105 of 10 mg/kg given weekly can be administered safely concurrently with Afinitor and Femara and assess pharmacokinetic parameters. Part 2 of the trial is expected to enroll up to 20 patients with locally advanced potentially resectable hormone-receptor positive and Her-2 negative breast cancer to determine the pathologic complete response rate and downstaging rate, or rate of tumor size reduction, at the time of surgery.

Completed Clinical Trials of TRC105

Phase 1 First-in-Human Clinical Trial of TRC105 in Patients with Advanced and Treatment-Resistant Cancer

We conducted a Phase 1, single agent, first-in-human ascending dose clinical trial evaluating the safety, tolerability, pharmacokinetics, pharmacodynamics and anti-tumor activity of TRC105 in patients with advanced solid tumors. The primary endpoint of the trial was to determine the recommended dose of TRC105 for Phase 2 clinical trials and assess overall safety and tolerability. Secondary endpoints included analysis of TRC105 distribution in the blood, assessment of whether antibodies were made in response to treatment with TRC105 and assessment of preliminary signs of antitumor activity. Given the limited number of patients in this clinical trial, no statistical analyses were performed. Fifty patients were treated with escalating doses of TRC105 until cancer progression or unacceptable toxicity was reached using a standard dose escalation design at dose levels of 0.01, 0.03, 0.1, 0.3, 1, 3, 10 and 15 mg/kg given weekly or every two weeks. The maximum tolerated dose was exceeded at 15 mg/kg given weekly due to anemia, an expected adverse event of TRC105 treatment. TRC105 exposure increased with increasing dose, and continuous serum concentrations that saturate endoglin receptors were maintained at 10 mg/kg given weekly and 15 mg/kg given every two weeks. The safety profile was distinct from that of VEGF inhibitors, and the adverse effects of hypertension and proteinuria seen commonly with VEGF inhibitors were rarely observed with TRC105. Pulmonary edema and low platelet counts, which are side effects of other inhibitors of the endoglin pathway, were not observed. Antibodies

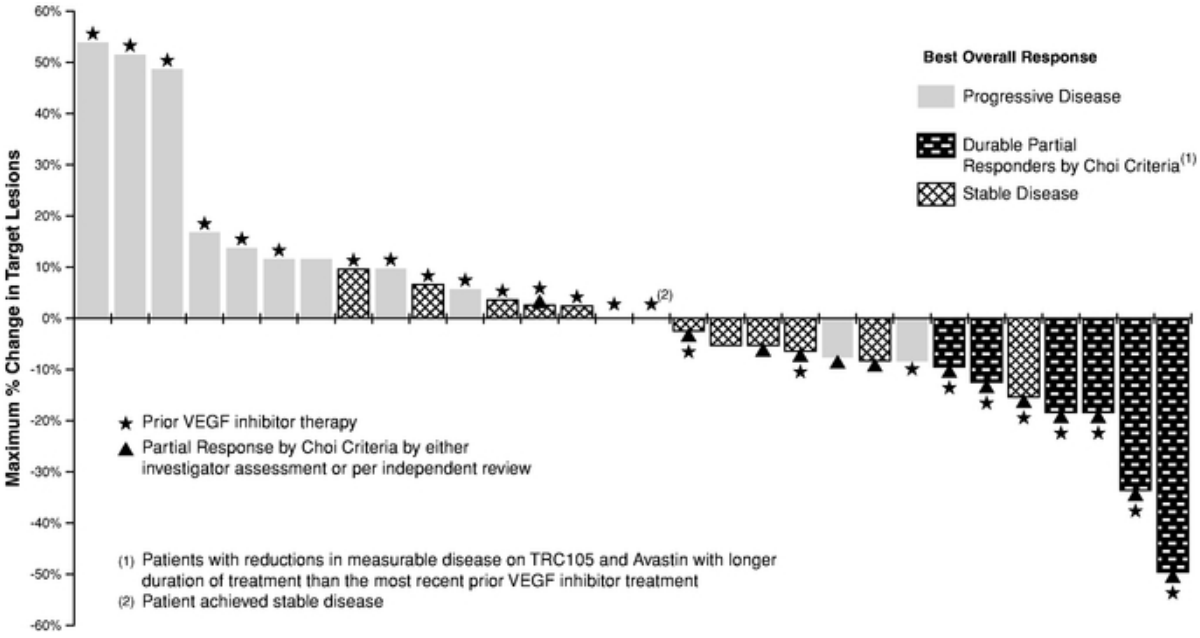
to TRC105 were not detected in patients treated with the formulation of TRC105 that is being used in our Phase 1 and Phase 2 clinical trials, indicating that TRC105 is not highly immunogenic. Stable disease or better was achieved in 21 of 45 evaluable patients (47%), including two patients with durable reductions in tumor burden lasting longer than 48 and 18 months, respectively. One of three patients had soft tissue sarcoma and remained on TRC105 for 18 months with a reduction in tumor burden of each of five pulmonary metastases, which was first detected two months after initiation of treatment. An overall reduction in the sum of tumor diameters of 13% was noted during treatment. The duration of TRC105 treatment exceeded the duration of three prior treatments: carboplatin and paclitaxel (four months), Arimidex (anastrozole) (eight months) and ifosfamide (two months), each of which had been previously discontinued because the cancer progressed. The anti-tumor data compared favorably with the first-in-human anti-tumor data reported with Avastin in a less treatment-resistant population. The majority of patients demonstrated an increase in plasma levels of VEGF at the time of cancer progression, providing a rationale for inhibiting the VEGF pathway in patients treated with TRC105. Lastly, patients at the 10 mg/kg and 15 mg/kg dose levels were observed to have dilated blood vessels in the skin or mucosal membranes, similar to those in patients with Osler-Weber-Rendu syndrome, indicating inhibition of the endoglin pathway. Results of this clinical trial were published in *Clinical Cancer Research* in 2012.

Phase 1/2 Clinical Trial of TRC105 with Avastin in Patients with Advanced and Treatment-Resistant Cancer

We completed a Phase 1/2 ascending dose trial evaluating the safety, tolerability, pharmacokinetics, pharmacodynamics and anti-tumor activity of TRC105 in combination with an approved dose of Avastin in patients with advanced and treatment-resistant solid tumors. The primary endpoint of the trial was to determine the recommended dose of TRC105 to be used in combination with Avastin for Phase 2 clinical trials and assess overall safety and tolerability of the combination. Secondary endpoints included analysis of TRC105 distribution in the blood, assessment of whether antibodies were made in response to treatment with TRC105 and assessment of preliminary evidence of improved anti-tumor activity when TRC105 was combined with Avastin. Given the limited number of patients in this clinical trial, no statistical analyses were performed. Thirty-eight patients primarily with colorectal and ovarian cancer were treated with escalating doses of TRC105 until cancer progression or unacceptable toxicity was reached using a standard dose escalation design at dose levels of 3, 6, 8 and 10 mg/kg given weekly, in combination with an approved dose of Avastin. TRC105 and Avastin were generally well tolerated when dosed together at their recommended single agent doses (10 mg/kg each) when the initial dose of TRC105 was delayed by one week and divided over two days to reduce the frequency and severity of headache. The concurrent administration of Avastin and TRC105 did not otherwise appear to increase the frequency or severity of known toxicities of TRC105 or Avastin. Pharmacokinetic studies indicated that treatment with Avastin increased endoglin expression on endothelium, a finding that was consistent with preclinical studies indicating endoglin may allow continued angiogenesis despite inhibition of the VEGF pathway. This finding provides support for targeting angiogenesis with anti-endoglin antibodies in combination with VEGF inhibitors. Pharmacokinetic studies also indicated that serum levels of TRC105 were continuously present at concentrations above levels needed to inhibit endoglin function. Antibodies to TRC105 were detected in two patients and were not associated with clinical effects. Biomarker studies indicated increased blood levels of platelet-derived growth factor, or PDGF, a soluble protein that plays a significant role in angiogenesis, in patients treated with TRC105 in combination with Avastin. Several patients, including patients with colorectal cancer and ovarian cancer whose cancer had previously progressed on Avastin or small molecule VEGF inhibitors, experienced responses, including ten partial responses as assessed by Choi criteria and two partial responses as assessed by RECIST 1.1.

The best response by maximum percent change decrease in target lesion size of each of 30 patients enrolled in the trial with measurable disease who underwent efficacy assessment is noted in the figure below, and patients who received prior treatment with at least one VEGF inhibitor are indicated by a star. Of 25 evaluable patients treated previously with VEGF inhibitors, 16 patients (64%) had stable disease, of whom two patients (8%) had partial responses as assessed by RECIST 1.1. Ten patients who received prior VEGF treatment (40%) had a partial response by Choi criteria and are denoted with a solid triangle and a star in the figure below. Six patients (24%) with responses by Choi criteria or RECIST 1.1 remained without cancer progression for longer than during their prior VEGF inhibitor therapy, and are therefore considered to have durable responses.

Maximum percentage change in target lesion size in cancer patients treated with TRC105 and Avastin



The six patients with reductions in tumor burden, who were partial responders as assessed by RECIST 1.1 or Choi criteria, and remained without cancer progression for longer than during their prior VEGF inhibitor therapy, are profiled further in the table below.

Summary of patients with durable responses

Patient Demographic	Primary Site of Disease	Number of Prior Cancer Regimens	Last Prior VEGF Inhibitor Containing Treatment	Duration of Last Prior VEGF Inhibitor Containing Treatment (days)	Duration of TRC105 + Avastin Treatment (days)
56-year-old woman	Ovarian	8	pegylated liposomal doxorubicin + Avastin	126	162
71-year-old woman	Ovarian	5	investigational treatment with small molecule VEGF inhibitor	141	218
66-year-old woman	Colorectal	7	Erbitux (cetuximab) + Avastin	31	162
81-year-old woman	Ovarian	6	Topotecan + Avastin	71	224
53-year-old man	Colorectal	2	5-fluorouracil + irinotecan + leucovorin + Avastin	33	861
55-year-old man	Colorectal	3	5-fluorouracil + irinotecan + leucovorin + Avastin	146	164

These collective data demonstrate that TRC105 is active with Avastin based on decreases of tumor size and durability of treatment in patients whose cancer progressed on prior treatment with Avastin or other VEGF inhibitors.

Phase 2 Clinical Trial of TRC105 as a Single Agent or Combined with Avastin in Patients with Glioblastoma that Progressed on Prior Avastin Treatment

We completed a Phase 2 clinical trial evaluating the safety, tolerability, and anti-tumor activity of TRC105 in combination with Avastin in patients with glioblastoma that progressed on prior initial treatment with combined chemotherapy and radiation therapy and subsequent treatment with Avastin. The primary endpoint of the trial was to determine median overall survival, and secondary endpoints included assessment of tolerability and determination of response rate and time to tumor progression. After an initial portion of the trial assessing the safety of TRC105 as a single agent, 16 patients were treated with TRC105 at 10 mg/kg given weekly with Avastin at 10 mg/kg given every two weeks until cancer progression or unacceptable toxicity was reached. The concurrent administration of TRC105 and Avastin did not appear to increase the frequency or severity of known toxicities of TRC105 or Avastin. The combination of TRC105 with Avastin provided clinical benefit to one patient whose cancer had progressed on Avastin immediately prior to entering the trial and who remained on treatment with TRC105 with Avastin for longer than the prior treatment with Avastin alone. The majority of patients with Avastin-resistant glioblastoma who enrolled in the trial had cancer progression in fewer than four months on prior Avastin treatment, and median progression-free survival was two months following treatment with TRC105 and Avastin. In future clinical trials, we will focus on enrolling patients with glioblastoma prior to Avastin treatment, when they may be more likely to be responsive to angiogenesis inhibition.

Phase 1 Clinical Trial of TRC105 with Xeloda in Patients with Metastatic Breast Cancer

We completed a Phase 1 ascending dose clinical trial evaluating the safety, tolerability, pharmacokinetics and anti-tumor activity of TRC105 in combination with Xeloda. The primary endpoint of the trial was to determine the recommended dose of TRC105 to be used in combination with Xeloda for Phase 2 clinical trials and to assess overall safety and tolerability of the combination. Secondary endpoints included analysis of TRC105 distribution in the blood, assessment of whether antibodies were made in response to treatment with TRC105 and assessment of preliminary evidence of improved anti-tumor activity when TRC105 was combined with Xeloda. Given the limited number of patients in this clinical trial, no statistical analyses were performed. Nineteen patients, primarily with metastatic breast cancer, were treated with escalating doses of TRC105 until cancer progression or unacceptable toxicity was reached using a standard dose escalation design at dose levels of 7.5 and 10 mg/kg given weekly, in combination with the recommended single agent dose of Xeloda of 1,000 mg/m^2 given twice daily for two weeks followed by a one week rest period. TRC105 and Xeloda were generally well tolerated when dosed together at their recommended single agent doses. The concurrent administration of TRC105 with Xeloda did not otherwise appear to increase the frequency or severity of expected toxicities of TRC105 or Xeloda. Pharmacokinetic studies indicated continuous serum levels of TRC105 at doses above target concentrations at both TRC105 dose level. Antibodies to TRC105 were detected in one patient. Several patients demonstrated evidence of clinical benefit, including one patient with metastatic breast cancer who achieved a partial response as assessed by RECIST 1.1.

Phase 2 Randomized Clinical Trial of TRC105 with Avastin in Patients with Renal Cell Carcinoma

NCI completed enrollment of a Phase 2 clinical trial to study the activity of TRC105 in combination with Avastin, compared to treatment with Avastin alone, in patients with renal cell carcinoma that included non-clear histology. The NCI-sponsored trial in renal cell carcinoma included approximately 20 centers in the United States and enrolled patients with all histologic types of renal cell carcinoma who had received as many as four prior systemic therapies, including as many as four prior VEGF inhibitors, and had not been treated with Avastin previously. The trial was designed to randomize 88 total patients in equal proportions to receive TRC105 and Avastin or Avastin alone with the goal of demonstrating a 100% increase in progression-free survival. However, an interim analysis performed in September 2014 concluded that the trial was unlikely to achieve the primary endpoint, and enrollment was closed following the accrual of 62 patients. Patients who were already enrolled are continuing treatment, and we expect to receive data from this trial in mid 2015.

Other Phase 1 and Phase 2 Clinical Trials of TRC105 in Cancer Patients

A Phase 1, single agent, ascending dose clinical trial sponsored by NCI enrolled 21 patients with metastatic and treatment-resistant prostate cancer. The primary endpoint of the trial was to determine the recommended dose of TRC105 to be used in Phase 2 clinical trials and to assess overall safety and tolerability. Secondary endpoints included analysis of TRC105 distribution in the blood, assessment of whether antibodies were made in response to treatment with TRC105 and assessment of preliminary evidence of improved anti-tumor activity. Given the limited number of patients in this clinical trial, no statistical analyses were performed. Data reported at the annual meeting of the American Society of Clinical Oncology in June 2012 demonstrated that TRC105 was generally well tolerated at the top dose level studied of 20 mg/kg given every other week, with an adverse event profile similar to that seen in the first-in-human trial. TRC105 demonstrated evidence of anti-tumor activity, including reductions in prostate specific antigen, or PSA, and stable disease as assessed by RECIST 1.1 in ten of 16 patients with measurable soft tissue disease. A Phase 2 clinical trial of TRC105 sponsored by

NCI enrolled 13 patients with advanced or metastatic bladder cancer that had progressed on prior treatment with chemotherapy. NCI has not yet reported clinical data for this trial.

A Phase 2 clinical trial sponsored by NCI enrolled 11 patients with advanced or metastatic hepatocellular carcinoma that had progressed on prior treatment with Nexavar. The primary endpoint of the trial was to determine the time to tumor progression. Data reported at the Gastrointestinal Cancer Symposium of the American Society of Clinical Oncology in January 2014 indicated TRC105 at 15 mg/kg every two weeks demonstrated anti-tumor activity in several of the ten patients presented, including in one patient who achieved a partial response as assessed by RECIST 1.1. However, at least three of the first ten patients needed to be free of tumor progression to enroll further patients in the trial, and only two of ten patients were free of tumor progression after four months of treatment.

Our Phase 2 clinical trial in 23 patients with advanced or metastatic ovarian cancer that had progressed on prior treatment with platinum chemotherapy treated with TRC105 at 10 mg/kg every week indicated limited anti-tumor activity, as evidenced by a minor tumor reduction in one patient and tumor marker reductions in several other patients. However, no patients achieved either of the dual primary endpoints of being free of tumor progression for at least six months or achieving a partial response as assessed by RECIST 1.1. Subsequent data from a Phase 1/2 clinical trial of TRC105 in combination with Avastin suggested advanced ovarian cancer patients were more likely to benefit from the combination treatment. These data are consistent with preclinical findings indicating that inhibition of the VEGF or endoglin pathway individually is less effective than inhibition of the VEGF and endoglin pathways simultaneously. Avastin was recently approved in the United States with chemotherapy for the treatment of ovarian cancer, and we expect to develop TRC105 in combination with Avastin and chemotherapy in this indication.

Safety of TRC105 as a Single Agent and in Combination with Approved VEGF Inhibitors

In clinical trials as of September 8, 2014, TRC105 has been administered to more than 300 patients and was generally well tolerated as a single agent and in combination with VEGF inhibitors. The most commonly reported adverse events related to TRC105 therapy, either alone or in combination, include anemia, dilated small vessels in the skin and mucosal membranes (which may result in nosebleeds and bleeding of the gums), headache, fatigue and gastrointestinal and other symptoms during the initial infusion of TRC105, or infusion reaction. Infusion reactions were reduced in frequency and severity through the use of premedication. The majority of treatment-related adverse events have been mild.

Serious adverse events, or SAEs, considered at least possibly related to TRC105 treatment as a single agent included bleeding in the stomach in a patient with undiagnosed ulcer disease, anemia, headache, lung infection, skin infection, infusion reaction, abdominal pain, back pain, bone pain, heart attack and light-headedness. Other than headache and nosebleed, which occurred in two patients each, each of these SAEs occurred in a single patient.

SAEs considered possibly related to TRC105 observed in patients treated with TRC105 in combination with Avastin included anemia, brain abscess, cellulitis, seizure (in a glioblastoma patient), fatal bleeding around the brain in a patient with glioblastoma who received an excess amount of medication to prevent blood clotting, headache, nosebleed, vomiting and deep vein thrombosis. Other than anemia, nosebleed, and deep venous thrombosis, which occurred in two patients each, each of these SAEs occurred in a single patient.

SAEs considered possibly related to TRC105 observed in hepatocellular carcinoma patients treated with TRC105 in combination with Nexavar included pancreatitis, cerebrovascular hemorrhage at a site of cerebral metastasis resulting in weakness on one side of the body in a patient with a platelet count below the normal range, fatal heart attack in a patient with significant coronary artery disease, temporary confusion in a patient with cirrhosis and elevated liver enzymes, infusion reaction and nosebleed. Each of these SAEs occurred in a single patient.

An SAE of infusion reaction considered possibly related to TRC105 was observed in a single renal cell carcinoma patient treated with TRC105 in combination with Inlyta. An SAE of headache considered possibly related to TRC105 was observed in a single breast cancer patient treated with TRC105 in combination with Xeloda. There have been no SAEs reported to date in soft tissue sarcoma patients considered related to TRC105 in patients treated with TRC105 in combination with Votrient.

Antibodies to TRC105 were detected in fewer than 5% of treated patients and were not associated with specific clinical effects.

TRC105 Investigational New Drug Applications

We are evaluating TRC105 in the United States in clinical trials under two INDs, the first of which we filed with the FDA in November 2007 for the treatment of patients with advanced solid tumors, and the second of which we filed with the FDA in September 2014 for the treatment of patients with renal cell carcinoma. Subsequent amendments to the first IND have included clinical protocols to study TRC105 alone, or in combination with VEGF inhibitors, in patients with multiple tumor types. TRC105 is also being studied in the United States under three INDs sponsored by NCI to evaluate TRC105 in patients with prostate cancer, liver cancer and bladder cancer, which NCI filed in December 2009, December 2010 and August 2010, respectively, and one IND sponsored by NCI to evaluate TRC105 in patients with renal cell carcinoma and glioblastoma, which NCI filed in April 2012. The INDs filed by NCI cross reference our IND.

Preclinical Studies

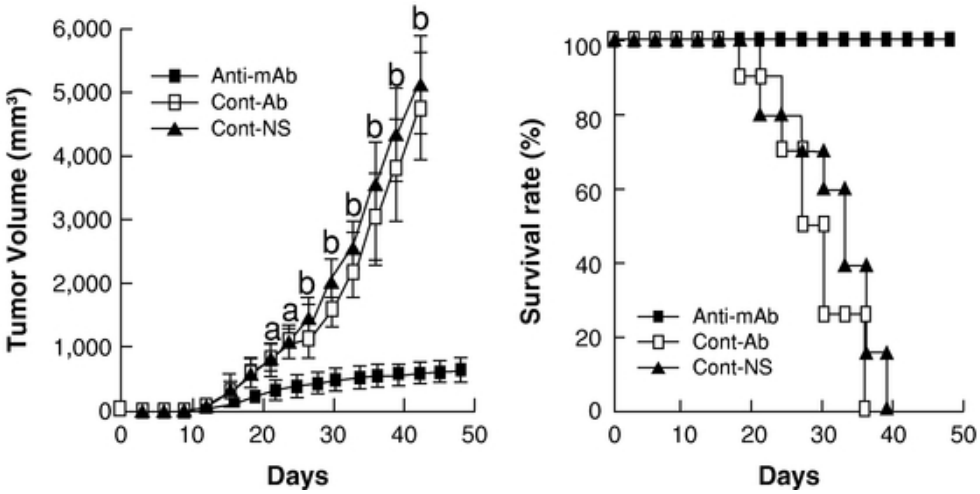
Anti-Endoglin Antibodies

A number of preclinical studies have demonstrated the feasibility of using anti-endoglin antibodies, both alone and in combination with VEGF inhibitors, to inhibit angiogenesis and treat tumors. These studies have also indicated that anti-endoglin antibodies and VEGF inhibitors may be more effective when used in combination than when used as single agents.

Anti-endoglin antibodies that bind to mouse endoglin have been shown to be effective anti-tumor agents in mice implanted with mouse tumor cells. An anti-endoglin antibody inhibited tumor growth of mouse liver cancer cells implanted subcutaneously and inhibited angiogenesis, as demonstrated by marked reduction in vascular density of the tumors treated with the anti-endoglin antibody. The figure on the left below shows the tumor progression in three groups of mice implanted with mouse liver cancer cells and then treated with one of anti-endoglin antibody ("Anti-mAb" in the figures below) antibody that did not bind endoglin ("Cont-Ab" in the figures below) or saline vehicle ("Cont-NS" in the figures below). Tumor growth was inhibited following treatment with the anti-endoglin antibody, and the degree of inhibition was statistically significant with a p-value of less than 0.05 at the time points indicated by "a" and with a p-value of less than 0.01 at the time points indicated by "b." A p-value is the probability that the reported result was achieved purely by chance, such that a p-value of less than or equal to 0.05 or 0.01 means that there is a 5.0% or 1.0% or less probability, respectively, that the difference between the control group and the treatment group is purely due to chance. A p-value of 0.05 or less typically represents a statistically significant result. Furthermore, tumors treated with anti-endoglin antibody contained fewer blood vessels compared with mice treated with antibody that did not bind endoglin or with saline vehicle. As illustrated on the figure on

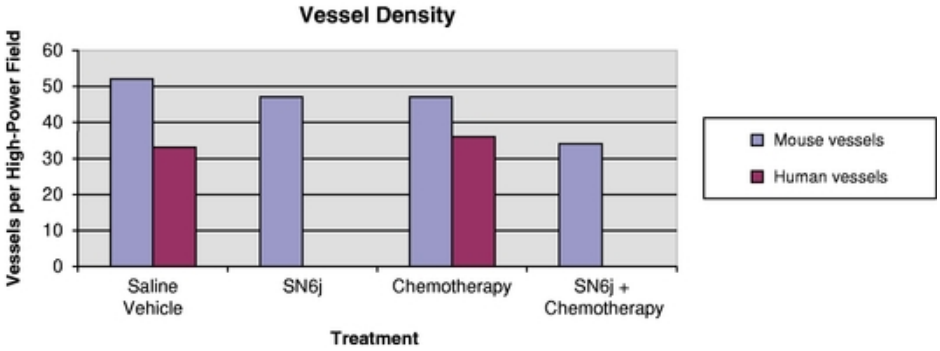
the right below, mice treated with the anti-endoglin antibody also survived significantly longer than animals treated with antibody that did not bind endoglin or saline vehicle.

Anti-tumor activity of anti-endoglin antibody in a mouse model of liver cancer



Our collaborator at the Roswell Park Cancer Institute showed that TRC105 is a potent inhibitor of angiogenesis mediated by human endothelial cells. A mouse engrafted with human skin was employed to compensate for the fact that the mouse antibody from which TRC105 was derived, SN6j, binds human endoglin to interrupt BMP binding, but does not interrupt BMP binding to mouse endoglin. Human breast cancer cells implanted into these mice grew based on the recruitment of blood vessels of mouse and human origin. SN6j was shown to suppress the growth of human breast cancer cells established in mice at a dose of 10 mg/kg when compared to saline vehicle and was able to increase the effects of cyclophosphamide chemotherapy. SN6j completely inhibited the growth of human blood vessels when given as a single agent or when combined with chemotherapy, as shown in the figure below, which depicts the number of blood vessels per high-power field in mice treated with saline vehicle and active treatments.

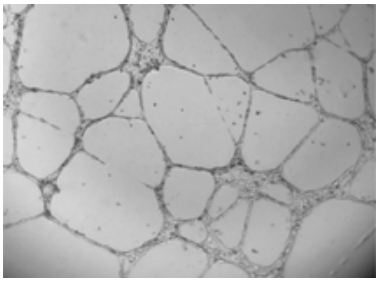
Inhibition of human blood vessel angiogenesis by anti-endoglin antibody in a mouse model of human breast cancer



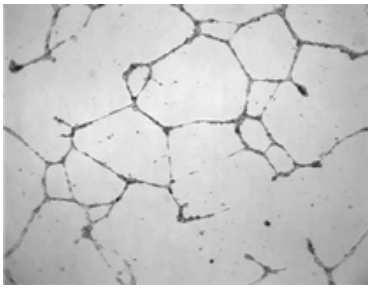
Our collaborator at Duke University has conducted preclinical studies on the effect of TRC105 in combination with Avastin on angiogenesis mediated by human endothelial cells. Angiogenesis was modeled using human endothelial cells, which formed visible polygons, a measure of vascular networks, in culture, as demonstrated in the figure below. TRC105 and Avastin each inhibited human endothelial cell organization into vascular networks, compared to untreated cells. However, the combination of the two agents more effectively inhibited the organization of human endothelial cells into vascular networks than either agent alone.

Inhibition of endothelial cell organization into vascular structure in the presence of TRC105 and Avastin

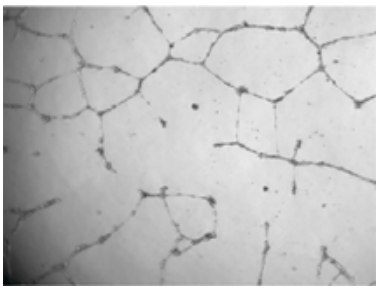
Untreated



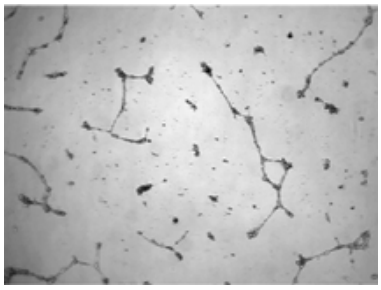
TRC105



Avastin

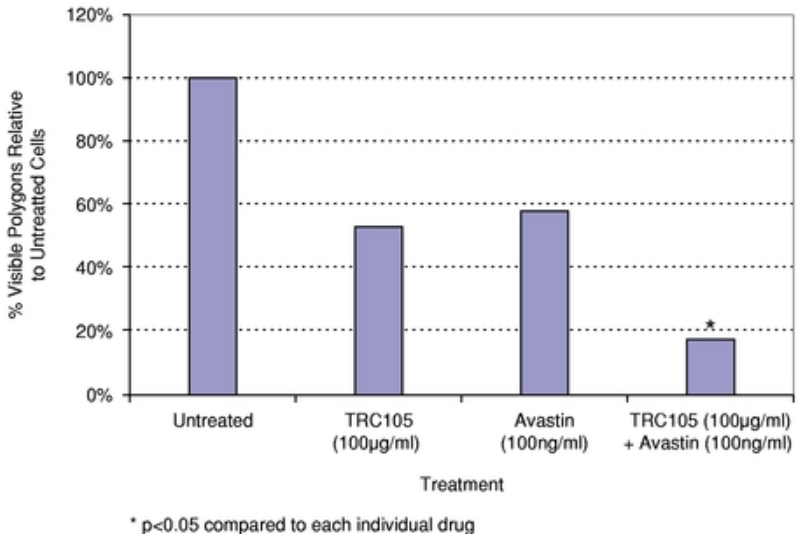


TRC105 + Avastin



Quantification of the number of visible polygons, as illustrated in the table below, indicated statistically significant inhibition with a p-value of less than 0.05 using the combination of the two drugs compared to each individual drug.

Comparison of the inhibition of endothelial cell organization into vascular structures



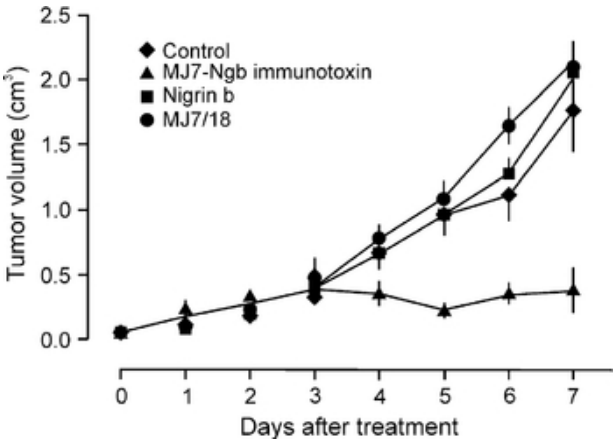
Anti-Endoglin Antibody Drug Conjugates

Many antibodies are more potent when linked to either drugs or toxins than as unconjugated antibodies. For example, Kadcyla (trastuzumab emtansine) is an approved antibody drug conjugate of the approved unconjugated antibody Herceptin (trastuzumab) and is active in patients whose cancer progressed on prior Herceptin treatment. In addition to its

potential as an unconjugated antibody, TRC105 could also be developed as an antibody drug conjugate.

Anti-endoglin antibody drug conjugates have been effective anti-tumor agents in preclinical models of human cancer in mice. MJ7/18, an antibody that binds to mouse endoglin, was conjugated to the Nigrin B toxin and dosed to mice bearing genetically identical melanoma tumors. Treatment of tumor-bearing mice with MJ7/18 or Nigrin B alone did not inhibit tumor growth compared to control animals. However, the anti-endoglin antibody drug conjugate, MJ7-Ngb immunotoxin, inhibited tumor growth and caused complete regressions of palpable tumors in several animals. Antibody drug conjugates constructed using our proprietary anti-endoglin antibodies have demonstrated similar results. In the future, we may pursue development of TRC105 as an antibody drug conjugate, which would complement its use as an unconjugated antibody.

Anti-tumor activity of anti-endoglin antibody drug conjugate in a mouse model of melanoma



Role of Anti-Endoglin Antibodies in AMD Treatment

Overview of AMD

AMD is a major public health problem that has a devastating effect on patients. AMD distorts central vision, which is necessary for daily activities such as reading, face recognition, watching television and driving and can lead to loss of central vision and blindness. According to a 2010 study sponsored by AMD Alliance International, the annual direct healthcare system cost of visual impairment worldwide due to AMD was estimated at approximately $255 billion.

According to the Macular Degeneration Partnership, approximately 15 million people in the United States and 30 million people worldwide suffer from some form of AMD. There are two forms of AMD: dry AMD and wet AMD. It is reported that wet AMD represents approximately 10% of all cases of AMD, but is responsible for 90% of the severe vision loss associated with the disease. Wet AMD is the leading cause of blindness in the Western world.

In a subset of AMD patients, dry AMD progresses to wet AMD as a result of abnormal angiogenesis in the choroid layer beneath the retina, which is referred to as choroidal neovascularization, or CNV. In the context of wet AMD, CNV is associated with the accumulation of other cell types and altered tissue. The new blood vessels associated with this abnormal angiogenesis tend to be fragile and often bleed and leak fluid into the macula, the central-most portion of the retina responsible for central vision and color perception. If left untreated, the blood vessel growth and associated leakage typically lead to retinal distortion and eventual retinal scarring, with irreversible destruction of the macula and loss of vision. This visual loss occurs rapidly with a progressive course.

Currently Available Therapies for Wet AMD

The current standard of care for wet AMD is administration by intraocular injection of VEGF inhibitors as single agents. VEGF inhibitors have been reported to be effective in treating wet AMD because of their ability to inhibit the effects of abnormal angiogenesis that defines CNV. The FDA has approved the VEGF inhibitors Lucentis (ranibizumab), Eylea and Macugen (pegaptanib sodium) for the treatment of wet AMD. Lucentis is an antibody fragment derived from the same full length antibody from which Avastin was derived. In 2013, annual worldwide sales of Lucentis and Eylea for all indications totaled more than $6.0 billion. This sales number does not include Avastin, which is commonly used off-label to treat wet AMD in the United States and, to a lesser extent, in the European Union.

The availability of VEGF inhibitors has significantly improved visual outcomes for many patients with wet AMD. A retrospective study published in 2012 confirmed that the prevalence of both legal blindness and moderate visual impairment in patients two years after being diagnosed with wet AMD has decreased substantially following the introduction of VEGF inhibitor therapy. Nonetheless, the condition of many patients with wet AMD treated with VEGF inhibitors does not improve significantly and in many cases deteriorates.

VEGF inhibitors prevent VEGF from binding to its natural receptor on endothelial cells in the abnormal new blood vessels, thereby inhibiting further CNV and leakage associated with wet AMD. However, VEGF inhibitor therapy may be limited in its ability to improve CNV. Results of third-party clinical trials suggest that visual outcomes for wet AMD patients receiving treatment with a VEGF inhibitor worsen over time and are often associated with the development of subretinal fibrosis and the growth of CNV over time. Furthermore, data from clinical trials conducted by Ophthotech Corporation indicate that vision in patients with AMD can be improved by targeting complementary pathways in combination with VEGF inhibitors.

As is the case with angiogenesis that drives tumor growth, we believe that the endoglin pathway serves as an escape pathway that allows continued CNV despite inhibition of the VEGF pathway. In addition, the impact of VEGF inhibitors may be limited by the activity of pericytes, which are the cells that cover the outside of blood vessels and support and stabilize newly formed vessels. Pericytes are not targeted by VEGF inhibitor therapies, but because they express endoglin, they are an additional target for anti-endoglin antibodies such as TRC105. These facts provide the rationale for treating wet AMD with a combination of anti-endoglin antibodies and VEGF inhibitors.

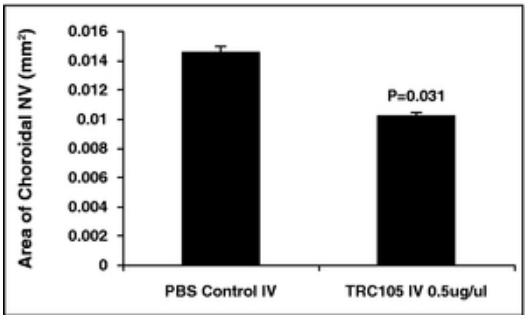
TRC105 Development in AMD

Preclinical Studies of TRC105 in AMD

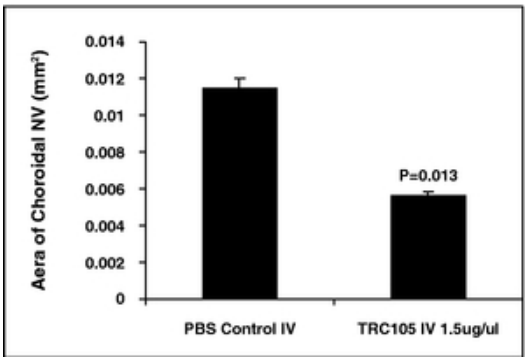
TRC105 was studied *in vivo* for its ability to inhibit angiogenesis through our collaborator at Johns Hopkins University, using a mouse model of CNV. Mice were divided into three groups that each received treatment with a different dose of TRC105, and each mouse received an intraocular injection of TRC105 in one eye and saline vehicle ("PBS Control IV" in the figures below) in the other eye. After 14 days, the area of CNV was measured by image analysis and the mean area and standard deviation were calculated. Treatment with TRC105 decreased the area of CNV as measured in square millimeters ("Area of Choroidal NV (mm^2)" in the figures below) in mice as illustrated in the figure below. The inhibitory effect of TRC105 on CNV was dose dependent, and statistically significant at each TRC105 dose level as evidenced by a

p-value of less than 0.05, and the highest dose administered (5 mg/mL) inhibited CNV by over 50% versus saline vehicle.

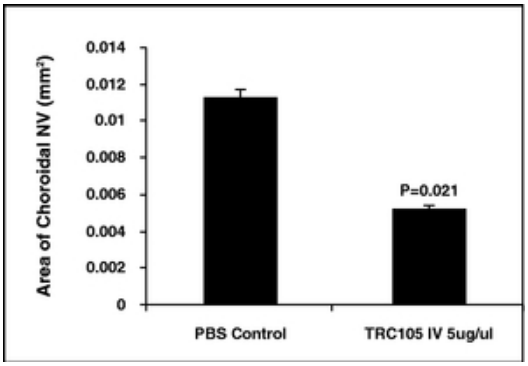
Dose dependent inhibition of CNV with TRC105 in a mouse model of wet AMD



Group 1 treated with 0.5 mg/mL of TRC105



Group 2 treated with 1.5 mg/mL of TRC105



Group 3 treated with 5 mg/mL of TRC105

Notably, the highest concentration of TRC105 used in this experiment was 5% of the concentration that we have developed for clinical trials of TRC105 in wet AMD patients.

DE-122 for Wet AMD

Our anti-endoglin antibodies for ophthalmology indications are being developed in collaboration with Santen. We have produced formulations of TRC105 for development in ophthalmology, and Santen is developing TRC105 under the name DE-122. Prior to initiating clinical trials of DE-122, Santen will need to file an IND. We expect that Santen will initiate clinical trials of DE-122 in wet AMD patients in 2015, and that these initial clinical trials will include testing of TRC105 in combination with a VEGF inhibitor.

Role of Anti-Endoglin Antibodies in Fibrotic Disease Treatment

Overview of Fibrosis

Fibrosis is a condition characterized by the harmful buildup of excessive fibrous tissue leading to scarring and ultimately organ failure. It is caused by the abnormal secretion of fibrous proteins, including collagen, by fibroblasts, which are cells that are present in all skin and connective tissue. As a result, fibrosis can affect almost any organ. Endoglin is expressed on fibroblasts, and its expression may be important to cell function. Increased endoglin expression has been demonstrated on fibroblasts from patients with heart failure and may play a role in the development of cardiac fibrosis as well as fibrotic diseases involving other organs. Examples of fibrotic diseases that may be initial target indications for TRC205 include NASH and IPF.

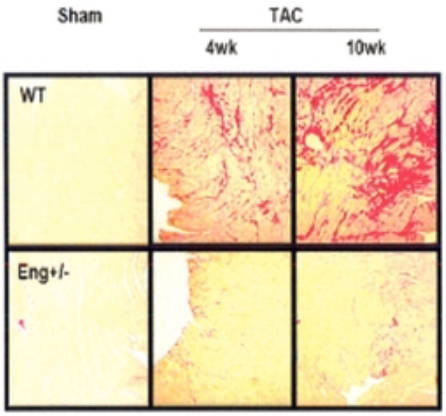
NASH is a common and serious chronic liver disease caused by excessive fat accumulation in the liver, or steatosis, that induces inflammation and may lead to progressive fibrosis and cirrhosis, followed by eventual liver failure and death. NASH is considered to be the second leading cause of hepatocellular carcinoma, and its prevalence is increasing. NASH is believed to be one of the most common chronic liver diseases worldwide, with an estimated prevalence of 2% to 5% of the general adult population in the United States, and an estimated prevalence of 2% to 3% in Europe and other developed countries. There are currently no therapeutic products approved for the treatment of NASH. Current treatment options are limited to off-label therapies. Given the lack of available treatment options, we believe that there is a significant unmet need for a novel therapy for NASH, particularly in those patients with advanced fibrosis and cirrhosis.

IPF is a disease characterized by progressive fibrosis of the lungs, which leads to their deterioration and destruction. The cause of IPF is unknown. Research suggests that there are between 40,000 and 80,000 diagnosed cases of IPF in the United States, with similar prevalence in the European Union. Esbriet (pirfenidone) is approved for the treatment of mild to moderate IPF in the United States, the European Union and other countries. OFEV (nintedanib) has been approved for the treatment of IPF in the United States and has been submitted for regulatory approval in the European Union.

The Role of Endoglin in Fibrosis

Preclinical and clinical data from Tufts Medical Center identified increased endoglin expression on fibroblasts in the left ventricle of patients with heart failure and demonstrated that inhibiting endoglin limits TGF-b signaling and production of fibrotic proteins by human cardiac fibroblasts. Inhibiting endoglin function decreased cardiac fibrosis, preserved left ventricular function, and improved survival in mouse models of heart failure. In the figure below, wild-type mice ("WT" in the figure below) that contain both copies of the endoglin gene develop fibrosis, as evidenced by collagen deposition darkly stained in the figure below, at four and ten weeks following the induction of heart failure. However, in endoglin deficient mice fibrosis is decreased at four and ten weeks, as evidenced by the lack of dark stain ("Eng +/-" in the figure below). Survival also improved in endoglin-deficient mice. Studies using TRC105 demonstrated that TRC105 reversed cardiac fibrosis in mouse models. These data were published in *Circulation* and the *Journal of the American Heart Association*. Subsequent preclinical research in mouse models indicated that antibodies to endoglin inhibit cardiac and liver fibrosis. Although initial findings indicate endoglin's importance in cardiac and liver fibrosis, we believe these findings may be applicable to multiple fibrotic diseases, including NASH, IPF and myelofibrosis, given that endoglin is expressed on fibroblasts, a cell that is critical to the process of fibrosis in the heart, lung, liver and other organs.

Cardiac Fibrosis in Wild-Type Mice and Endoglin-Deficient Mice



TRC205 and TRC105 Development in Fibrotic Diseases

We may develop TRC105 in myelofibrosis, a hematologic malignancy characterized by fibrosis in the bone marrow that results in decreased production of red blood cells, white blood cells and platelets. We also are using our knowledge of the endoglin pathway to design and evaluate a fully humanized and deimmunized anti-endoglin antibody called TRC205. We have cloned this antibody and demonstrated high affinity binding to human endoglin. We expect to contract with a third-party manufacturer to prepare production-grade cell lines for the manufacture of TRC205 in accordance with current good manufacturing practice, or cGMP, to file an IND to begin clinical development of TRC205 in non-malignant fibrotic diseases in 2016.

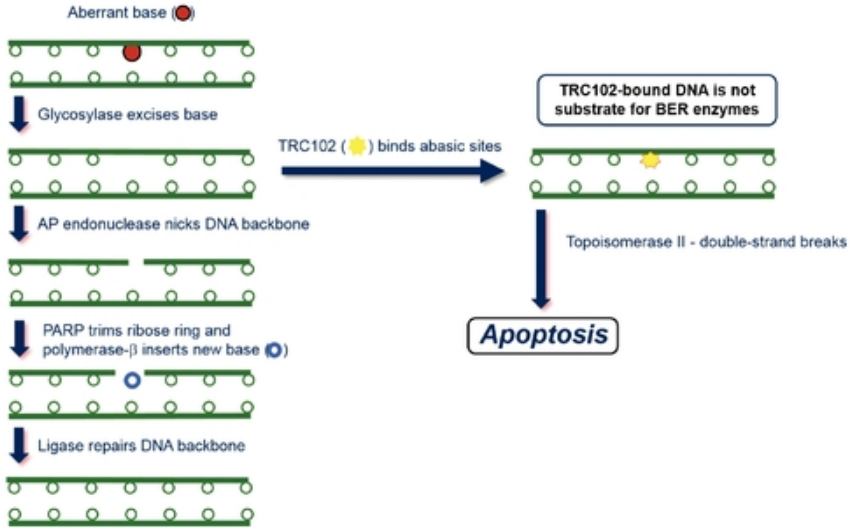
Overview of Base Excision Repair and the Mechanism of Action of TRC102

Base-excision repair, or BER, is a complex and fundamental cellular process used by cancer cells to repair the DNA damage caused by chemotherapeutics, especially the classes of chemotherapeutics known as alkylating agents, including Temodar, dacarbazine and bis-dichloroethyl-nitrosourea, or BCNU, and anti-metabolite agents, including Fludara and Alimta. The process of BER removes DNA bases damaged by chemotherapy, resulting in the formation of gaps in the DNA strand called apurinic and apyrimidinic, or AP, sites. The appropriate base is then inserted in this gap to restore the proper tumor DNA sequence. By this process, cancer cells can circumvent the anti-tumor effects of chemotherapy.

Inhibition of BER has been proposed as a way to improve the efficacy of chemotherapeutics; however, to our knowledge, no inhibitors of BER have yet been tested in clinical trials. We are developing TRC102 (methoxyamine hydrochloride) to reverse resistance to specific chemotherapeutics by inhibiting BER. TRC102 interrupts BER by rapidly and covalently binding within AP sites, converting the AP site to a substrate for the enzyme topoisomerase II,

which cleaves TRC102-bound DNA, resulting in an accumulation of DNA strand breaks that trigger cellular apoptosis, or programmed cell death, as illustrated in the figure below:

TRC102 binding results in apoptosis



The induction of apoptosis by TRC102 is relatively selective for cancer cells, which typically overexpress topoisomerase II. In nonmalignant cells with low topoisomerase II expression, TRC102-bound DNA is excised and replaced by a separate DNA repair system.

TRC102 Development in Oncology

TRC102 is being developed to reverse resistance to Temodar, an alkylating chemotherapeutic, as well as to Alimta and Fludara, two antimetabolite chemotherapeutics. We consider it advantageous to combine TRC102 with Alimta because Alimta is already approved in one large market indication (lung cancer) and one orphan drug indication (mesothelioma). Temodar is an approved chemotherapeutic used as a standard of care agent to treat glioblastoma, and Fludara is an approved chemotherapeutic used as a standard of care agent to treat lymphoma and leukemia. We have completed a Phase 1 clinical trial of oral TRC102 given with Alimta, and Phase 1 clinical trials of intravenous TRC102 with Temodar and with Fludara are ongoing through our collaborator, Case Western. We are also collaborating with NCI in the development of TRC102, and NCI is studying oral TRC102 with Temodar in a Phase 1 clinical trial in cancer patients who do not have brain metastases. We also expect that NCI will initiate a Phase 1/2 clinical trial of TRC102 with Temodar in glioblastoma, a Phase 1 clinical trial of TRC102 with Alimta and cisplatin in mesothelioma, a Phase 2 clinical trial of TRC102 with Alimta in patients with lung cancer, and a Phase 1 clinical trial of TRC102 with Alimta, cisplatin and radiation therapy in patients with lung cancer. If Phase 2 data indicates activity of TRC102 with Temodar, we believe this data would support the initiation of a Phase 3 clinical trial with the goal of approving TRC102 with Temodar for treatment of glioblastoma. If Phase 2 data indicates activity of TRC102 with Alimta or other antimetabolite chemotherapeutics, we believe this data would support the initiation of Phase 3 clinical trials with the goal of approving TRC102 for treatment with Alimta or other approved antimetabolite chemotherapeutics. We expect to fund Phase 3 clinical trials, if merited by Phase 2 data.

We filed an IND for TRC102 in March 2008, Case Western filed an IND for TRC102 in March 2006, and NCI filed an IND for TRC102 in March 2013, all for the treatment of patients with advanced solid tumors. The IND filed by NCI cross references our IND.

Completed Phase 1 Clinical Trial

We completed a Phase 1 ascending dose clinical trial evaluating the safety, tolerability, pharmacokinetics, pharmacodynamics and anti-tumor activity of TRC102 given with Alimta in patients with advanced solid tumors. The primary endpoint of the trial was to determine the recommended dose of TRC102 to be used in combination with Alimta for Phase 2 clinical trials and to assess overall safety and tolerability of the combination. Secondary endpoints included analysis of TRC102 distribution in the blood, assessment of whether TRC102 inhibited BER and assessment of preliminary evidence of improved anti-tumor activity when TRC102 was combined with Alimta. Given the limited number of patients in this clinical trial, no statistical analyses were performed. Twenty-eight patients were treated with escalating doses of TRC102 until cancer progression or unacceptable toxicity using a standard dose escalation design at dose levels of 15, 30, 60 and 100 mg/m^2 given once daily for four days of recurring three-week cycles with the approved dose of Alimta given every three weeks. The maximum tolerated dose was exceeded at the top dose of 100 mg/m^2 given once daily due to anemia, as predicted by preclinical studies. Anemia was the only dose limiting toxicity reported and was not accompanied by significant low platelet count or low white blood cell count, and was reversible and manageable with standard supportive measures. The 30 mg/m^2 daily TRC102 dose level was generally well tolerated and achieved target TRC102 levels in the blood and inhibited BER as expected in the peripheral blood cells of cancer patients. In addition, Alimta exposure analyzed following dosing with the co-administration of TRC102 was similar to published Alimta exposures, indicating that TRC102 did not affect the clearance of Alimta.

All 28 patients had RECIST-defined measurable disease, and 25 underwent at least one response assessment. Fifteen patients had a best response of stable disease or better lasting for three or more cycles, including a 61-year-old woman with metastatic salivary gland cancer treated previously with Erbitux, Taxotere (docetaxel) and carboplatin, whose tumor expressed high levels of a marker associated with resistance to Alimta. This patient had a partial response as assessed by RECIST 1.1 and remained in our clinical trial without cancer progression for 14 months. In addition, 14 patients had stable disease for three or more cycles including patients with squamous cell lung cancer (three patients), epithelial ovarian cancer (three patients), colorectal cancer (two patients), non-squamous non-small cell lung cancer (one patient), pancreatic cancer (one patient), prostate cancer (one patient), endometrial cancer (one patient), head and neck cancer (one patient) and breast cancer (one patient). These data were published in *Investigational New Drugs* in 2012.

Ongoing Clinical Trials of TRC102

As of April 2012, Case Western had dosed 23 cancer patients in a Phase 1 clinical trial combining TRC102 as an IV formulation with Temodar, which is expected to enroll approximately 50 patients. Interim data presented at the annual meeting of the American Association for Cancer Research in 2012 indicated TRC102 was well tolerated with Temodar and inhibited BER as expected in the peripheral blood cells of cancer patients, and patients achieved stable disease as assessed by RECIST 1.1 for up to 11 months. Case Western is also enrolling cancer patients in a Phase 1 clinical trial combining TRC102 as an IV formulation with Fludara, which has enrolled 20 patients and which was presented at the annual meeting of the American Society of Hematology in San Francisco in December 2014. The presentation concluded that the combination of Fludara and TRC102 was well tolerated and resulted in partial response and stable disease by RECIST 1.1 in patients treated previously with Fludara. Further, the combination of Fludara and TRC102 caused DNA damage that was consistent with the expected activity of the combination of the two drugs.

NCI has initiated a Phase 1 clinical trial of oral TRC102 with Temodar in cancer patients who do not have brain metastases. NCI has also selected cooperative groups or academic

medical centers to study TRC102 with Temodar in brain cancer patients in a Phase 1/2 clinical trial through the American Brain Tumor Consortium, to study TRC102 with Alimta and cisplatin in patients with mesothelioma in a Phase 1 clinical trial through the California Cancer Consortium, to study TRC102 with Alimta in patients with lung cancer in another Phase 2 clinical trial through the California Cancer Consortium and to study TCR102 with Alimta, cisplatin and radiation therapy in lung cancer in a Phase 1 clinical trial through Case Western.

Preclinical Studies

Preclinical studies conducted by Case Western demonstrated that increased DNA strand breaks occurred in cells exposed to BCNU in combination with TRC102 versus cells exposed to BCNU alone. These results suggest that a significant increase in DNA damage occurs when an alkylating agent is combined with TRC102. TRC102 also reversed resistance of colorectal cancer cells to BCNU *in vivo*. Four human colorectal cancer cell lines were grown as tumors in mice and then exposed to TRC102 and BCNU. While all cell lines were insensitive to BCNU alone, the combined administration of TRC102 and BCNU resulted in significant growth inhibition in all tested human tumors grown in mice.

TRC102 also increased the anti-tumor effect of another alkylating chemotherapeutic, Temodar. Tumor regression was noted when mice were treated with a combination of Temodar and TRC102. In comparison, each agent alone either had no effect or delayed tumor growth but did not produce regression. Moreover, although TRC102 was able to improve the efficacy of Temodar, there was no additional toxicity compared to animals treated with Temodar alone as assessed by body weight and complete blood counts. Tumor apoptosis in this mouse experiment occurred in a dose- and time-dependent manner after treatment with TRC102 and Temodar. Additional preclinical studies indicate that TRC102 increased the efficacy of the combination of Temodar and a poly ADP-ribose polymerase, or PARP, inhibitor. These data suggest that the inhibition of BER by TRC102 increases the sensitivity of tumor cells to the effects of alkylating agents such as Temodar and BCNU. TRC102's lack of toxicity provides an excellent opportunity to increase the therapeutic effects of alkylating agents while avoiding the toxicities of combination therapies with cytotoxic agents. We believe this approach may benefit patients whose therapy requires the use of alkylating agents for treatment, including patients with breast, brain and urinary tract cancers, as well as hematologic cancers such as myeloma and lymphoma.

Further data from preclinical studies combining TRC102 with Fludara and Alimta indicated that TRC102 similarly increased the efficacy of a second class of chemotherapeutics known as anti-metabolites. DNA damage caused by the anti-metabolite Fludara is repaired by BER. As with alkylating chemotherapeutics, TRC102 increased the number of DNA strand breaks caused by Fludara, leading to increased apoptosis. The addition of TRC102 also increased the anti-tumor activity of Fludara in a study using human colon cancer cells grown in mice. Similar studies were conducted with Alimta, another anti-metabolite agent. Alimta treatment induced BER in cancer cells, as evidenced by the generation of large numbers of AP sites. Treatment with Alimta in combination with TRC102 increased the number of DNA strand breaks relative to treatment with Alimta alone. TRC102 also reversed resistance to Alimta in human lung cancer cells grown in mice.

Clinical and Regulatory Efficiencies

Our clinical operations and regulatory affairs groups are responsible for significant aspects of our clinical trials, including site selection, site qualification, site initiation, site monitoring, maintenance of the trial master file, regulatory compliance, drug distribution management, contracting and budgeting, database management, edit checks, query resolution, and clinical study report preparation. The use of this internal resource eliminates the cost associated with hiring CROs to manage clinical, regulatory and database aspects of the Phase 1 and Phase 2 clinical trials that we sponsor in the United States. In our experience, this model has resulted in capital efficiencies and improved communication with clinical trial sites, which expedite patient enrollment and access to patient data compared to a CRO-managed model, and we plan to leverage this capital efficient model for future product development.

We have also been able to advance clinical development of TRC105 and TRC102 in a capital-efficient manner through our collaboration with NCI. Both of our clinical stage assets, TRC105 and TRC102, have been selected by NCI for funding of Phase 1 and Phase 2 development. This highly competitive program is designed to accelerate the development of promising oncology drugs that target novel anti-cancer pathways. Genentech Inc. collaborated with NCI to accelerate the development of Avastin. Notably, Phase 3 clinical trials of Avastin (in lung cancer, breast cancer, and renal cell carcinoma) were conducted through NCI, and data from these Phase 3 clinical trials were important elements of the supplemental Biologics License Applications, or BLAs, submitted by Genentech that resulted in the approval of Avastin in these indications. Phase 2 clinical trials of both TRC102 and TRC105 are being performed in collaboration with NCI. If merited by Phase 2 data, we expect to fund initial Phase 3 clinical trials of TRC105 and TRC102 and, based on NCI's past course of conduct with similarly situated pharmaceutical companies in which it has sponsored pivotal clinical trials following receipt of positive Phase 2 data, we anticipate that NCI will sponsor Phase 3 clinical trials in additional indications.

Collaboration and License Agreements

License Agreement with Santen

In March 2014, we entered into a license agreement with Santen, under which we granted Santen an exclusive, worldwide license to certain patents, information and know-how related to TRC105, or the TRC105 Technology. Under the agreement, Santen is permitted to use, develop, manufacture and commercialize TRC105 products for ophthalmology indications, excluding systemic treatment of ocular tumors. Santen also has the right to grant sublicenses to affiliates and third party collaborators, provided such sublicenses are consistent with the terms of our agreement. In the event Santen sublicenses any of its rights under the agreement relating to the TRC105 Technology, Santen will be obligated to pay us a portion of any upfront and certain milestone payments received under such sublicense.

Santen has sole responsibility for funding, developing, seeking regulatory approval for and commercializing TRC105 products in the field of ophthalmology. In the event that Santen fails to meet certain commercial diligence obligations, we will have the option to co-promote TRC105 products in the field of ophthalmology in the United States with Santen. If we exercise this option, we will pay Santen a percentage of certain development expenses, and we will receive a percentage of profits from sales of the licensed products in the ophthalmology field in the United States, but will not also receive royalties on such sales.

We will own any and all discoveries and inventions made solely by us under the agreement, and Santen will own any and all discoveries and inventions made solely by Santen under the agreement. We will jointly own discoveries and inventions made jointly by us and Santen. We have the first right, but not the obligation, to enforce the patents licensed to Santen

under the agreement, and Santen has the first right, but not the obligation, to enforce the patents it controls that are related to TRC105 and the patents owned jointly by us and Santen. Subject to certain limitations, if the party with the first right to enforce a patent fails to timely do so, the other party will have the right to enforce such patent.

In consideration of the rights granted to Santen under the agreement, we received a one-time upfront fee of $10.0 million. In addition, we are eligible to receive up to a total of $155.0 million in milestone payments upon the achievement of certain milestones, of which $20.0 million relates to the initiation of certain development activities, $52.5 million relates to the submission of certain regulatory filings and receipt of certain regulatory approvals and $82.5 million relates to commercialization activities and the achievement of specified levels of product sales. If TRC105 products are successfully commercialized in the field of ophthalmology, Santen will be required to pay us tiered royalties on net sales ranging from high single digits to low teens, depending on the volume of sales, subject to adjustments in certain circumstances. In addition, Santen will reimburse us for all royalties due by us under certain third party agreements with respect to the use, manufacture or commercialization of TRC105 products in the field of ophthalmology by Santen and its affiliates and sublicensees. Royalties will continue on a country-by-country basis through the later of the expiration of our patent rights applicable to the TRC105 products in a given country or 12 years after the first commercial sale of the first TRC105 product commercially launched in such country.

Santen may unilaterally terminate this agreement in its entirety, or on a country-by-country basis, for any reason or for no reason upon at least 90 days' notice to us (or 30 days' notice if after a change in control). Either party may terminate the agreement in the event of the other party's bankruptcy or dissolution or for the other party's material breach of the agreement that remains uncured 90 days (or 30 days with respect to a payment breach) after receiving notice from the non-breaching party. Unless earlier terminated, the agreement continues in effect until the termination of Santen's payment obligations.

License Agreement with Roswell Park Cancer Institute and Health Research Inc.

In November 2005, we entered into a license agreement with Health Research Inc. and Roswell Park Cancer Institute, referred to collectively as RPCI. The agreement was amended in November 2009, February 2010 and September 2014. Under the agreement, we obtained an exclusive, worldwide license to certain patents and other intellectual property rights controlled by RPCI related to anti-endoglin antibodies, including TRC105, and their therapeutic uses, which we refer to as the RPCI Technology, and a non-exclusive, worldwide license to certain know-how controlled by RPCI related to the RPCI Technology. Under the agreement, we are permitted to use, manufacture, develop and commercialize products utilizing the RPCI Technology in all fields of use. In addition, we are permitted to sublicense our rights under the agreement to third parties.

Under the agreement, we are responsible for development and commercialization activities for products utilizing the RPCI Technology, and we are obligated to use all commercially reasonable efforts to bring a product utilizing the RPCI Technology to market timely and efficiently.

In consideration of the rights granted to us under the agreement, we paid a one-time upfront fee to RPCI. In addition, we may be required to pay up to an aggregate of approximately $6.4 million upon the achievement of certain milestones for products utilizing the RPCI Technology, including TRC105, of which approximately $1.4 million relates to the initiation of certain development activities and $5.0 million relates to certain regulatory filings and approvals. Pursuant to the amendment entered into in November 2009, we may also be required to pay up to an aggregate of approximately $6.4 million upon the achievement of certain

milestones for products utilizing a patent owned by us covering humanized anti-endoglin antibodies, including TRC205, of which approximately $1.4 million relates to the initiation of certain development activities and $5.0 million relates to certain regulatory filings and approvals. Upon commercialization, we will be required to pay RPCI mid single-digit royalties based on net sales of products utilizing the RPCI Technology in each calendar quarter, subject to adjustments in certain circumstances. In addition, pursuant to the amendment entered into in November 2009, we will be required to pay RPCI low single-digit royalties based on net sales in each calendar quarter of products utilizing our patent covering humanized anti-endoglin antibodies. Our royalty obligations continue until the expiration of the last valid claim in a patent subject to the agreement, which we expect to occur in 2029, based on the patents currently subject to the agreement.

We may unilaterally terminate this agreement in whole or in part, for any reason or no reason, upon at least 60 days' notice to RPCI. RPCI may terminate the agreement if we fail to pay any amount due under the agreement or materially breach the agreement and the breach remains uncured 90 days after receiving notice. In the event of our bankruptcy, the agreement will automatically terminate. Unless otherwise terminated, the agreement will remain in effect on a country-by-country basis until the expiration of the last valid claim under the patents subject to the agreement.

License Agreement with Case Western

In August 2006, we entered into a license agreement with Case Western, under which we obtained an exclusive, worldwide license to certain patents, know-how and other intellectual property controlled by Case Western related to methoxyamine, which we refer to as the TRC102 Technology. Under the agreement, we have the right to use, manufacture and commercialize products utilizing the TRC102 Technology for all mammalian therapeutic uses, and to sublicense these rights.

Under the agreement, we are generally obligated to use our best efforts to commercialize the TRC102 Technology as soon as possible. We are also required to meet specified diligence milestones, and if we fail to do so and do not cure such failure, Case Western may convert our license into a non-exclusive license or terminate the agreement.

In consideration of the rights granted to us under the agreement, we paid a one-time upfront fee to Case Western. In addition, we may be required to pay up to an aggregate of approximately $9.8 million in milestone payments, of which $650,000 relates to the initiation of certain development activities and approximately $9.1 million relates to the submission of certain regulatory filings and receipt of certain regulatory approvals. If products utilizing the TRC102 Technology are successfully commercialized, we will be required to pay Case Western a single-digit royalty on net sales, subject to adjustments in certain circumstances. Beginning on the earlier of a specified number of years from the effective date of the agreement and the anniversary of the effective date following the occurrence of a specified event, we will be required to make a minimum annual royalty payment of $75,000, which will be credited against our royalty obligations. In the event we sublicense any of our rights under the agreement relating to the TRC102 Technology, we will be obligated to pay Case Western a portion of certain fees we may receive under the sublicense. Our royalty obligations will continue on a country-by-country basis through the later of the expiration of the last valid claim under the TRC102 Technology or 14 years after the first commercial sale of a product utilizing the TRC102 Technology in a given country.

We may unilaterally terminate this agreement in its entirety, for any reason or for no reason, upon at least 30 days' notice to Case Western. If we do so, we will be required to pay Case Western a termination fee. If we fail to pay any amount required under the agreement and

do not cure the default within 90 days of receiving notice, Case Western will have to right to convert our exclusive license to a non-exclusive license or to terminate the agreement entirely. Either party may terminate the agreement in the event of the other party's material breach of the agreement that remains uncured 60 days after receiving notice of the breach.

License Agreement with Lonza Sales AG

In June 2009, we entered into a license agreement with Lonza Sales AG, or Lonza, under which we obtained a world-wide non-exclusive license to Lonza's glutamine synthetase gene expression system consisting of cell lines into which TRC105 may be transfected and corresponding patents and applications, which we refer to as the Lonza Technology. Under the agreement, we are permitted to use, develop, manufacture and commercialize TRC105 obtained through use of the Lonza Technology.

In consideration for the rights granted to us under the agreement, we are required to pay Lonza a low single-digit percentage royalty on the net selling price of TRC105 product manufactured by Lonza. In the event that we or a strategic partner or collaborator manufactures the product, we will be required to pay Lonza an annual lump sum payment of £75,000, along with a low single-digit percentage royalty on the net selling price of the manufactured TRC105 product. In the event that we sublicense our manufacturing rights under the agreement (other than to a strategic partner or collaborator), we will be obligated to pay Lonza an annual lump sum payment of £300,000 per sublicense, along with a low single-digit percentage royalty on the net selling price of the manufactured TRC105 product. If, on a country-by-country basis, the manufacture or sale of the TRC105 product is not protected by a valid claim in a licensed patent, our royalty obligations in such country will decrease and will expire 12 years after the first commercial sale of the product.

We may unilaterally terminate this agreement for any reason upon at least 60 days' written notice to Lonza. Either party may terminate the agreement by written notice if the other party commits a breach and, if the breach is curable, does not cure the breach within 30 days of receiving notice from the non-breaching party. In addition, either party may terminate the agreement with written notice in the event of the other party's liquidation or appointment of a receiver. Unless earlier terminated, the agreement continues in effect until the later of the expiration of the last valid claim in a licensed patent or for so long as the know-how subject to the agreement is identified and remains secret and substantial.

Cooperative Research and Development Agreements with NCI

We are a party to three Cooperative Research and Development Agreements, or CRADAs, with the U.S. Department of Health and Human Services, as represented by NCI, for the development of TRC105 and TRC102 for the treatment of cancer. We entered into the two CRADAs governing the development of TRC105 in December 2010, or the 2010 CRADA, and January 2011, or the 2011 CRADA, respectively. The 2011 CRADA was amended in March 2013. The 2010 CRADA is with the Division of Cancer Treatment and Diagnosis of NCI, and the 2011 CRADA is with NCI's Center for Cancer Research. We entered into the CRADA governing the development of TRC102 in August 2012.

Under the CRADAs, NCI conducts clinical trials and non-clinical studies of either TRC105 or TRC102. We are responsible for supplying TRC105 for NCI's activities under the TRC105 CRADAs.

Pursuant to the terms of the 2010 CRADA, we are required to pay NCI $20,000 per clinical trial per year as well as expenses incurred by NCI in connection with carrying out its responsibilities under the 2010 CRADA, up to an aggregate maximum of $500,000 per year, as well as up to $5,000 per year for personnel-related expenses. At our discretion, we may also

provide additional funding to support assays and other studies. In addition, we made a one-time payment of $20,000 to support regulatory filings. Under the 2011 CRADA, we are required to pay NCI $5,000 per year for support for its research activities, as well as up to $5,000 per year for personnel-related expenses. We may also provide funding for mutually agreed upon animal studies. Under the TRC102 CRADA, we are required to pay NCI $20,000 per year per Phase 1 clinical trial and $25,000 per year per Phase 2 clinical trial, as well as expenses incurred by NCI in connection with carrying out its responsibilities under the TRC102 CRADA, up to an aggregate maximum per year of $200,000. We may also provide funding to support assays and other studies, and if NCI supplies TRC102 for additional mutually approved clinical trials beyond the planned trials, we will reimburse NCI for costs associated with manufacturing TRC102. In addition, we made a one-time payment of $20,000 for the initial IND filing and may be required to make additional one-time payments of $10,000 each for additional IND filings. Funding for clinical trials beyond those contemplated by the 2010 CRADA or the TRC102 CRADA will be determined in an amendment to the applicable CRADA. We have incurred an aggregate of $38,330 and $86,666 in annual clinical support payments under the CRADAs for the years ended December 31, 2012 and 2013, respectively.

Under each CRADA, each party individually owns all inventions, data and materials produced solely by its employees in the course of performing research activities pursuant to the CRADA. The parties jointly own any inventions and materials that are jointly produced by employees of both parties. Subject to certain conditions, we have the option under each CRADA to negotiate commercialization licenses from the government to intellectual property conceived or first reduced to practice in performance of the CRADA research plan that was developed solely by NCI employees or jointly by us and NCI employees.

Each CRADA has a five-year term, with the 2010 CRADA and the 2011 CRADA expiring on December 22, 2015 and January 28, 2016, respectively, and the TRC102 CRADA expiring on August 7, 2017. Each CRADA may be terminated at any time by mutual written consent, and we or NCI may unilaterally terminate any of the CRADAs for any reason or no reason by providing written notice at least 60 days before the desired termination date.

Sponsored Research Agreement with Tufts Medical Center, Inc.

In December 2014, we entered into a Sponsored Research Agreement with Tufts Medical Center, Inc., or Tufts MC, pursuant to which Tufts MC will conduct and we will fund a pre-clinical study of TRC105 in cardiac fibrosis.

In addition, we and Tufts MC have agreed on terms under which we could obtain an exclusive worldwide license to certain of Tufts MC's pre-existing intellectual property related to the treatment of cardiac fibrosis by targeting the endoglin pathway, as well as any new intellectual property generated from the pre-clinical research that we designate.

We and Tufts MC agreed to negotiate the license in good faith for a period of time following the completion of the pre-clinical research according to certain pre-established terms which include an up-front license fee payable to Tufts on the effective date of the license agreement, an annual license maintenance fee payable until the first licensed product is commercialized and reimbursement by us of Tufts MC's fees and expenses associated with prosecuting and maintaining licensed intellectual property. The license agreement would also require us to expend specified minimum amounts on development and commercialization during the first four years and to achieve certain development events within prescribed timeframes. We and Tufts MC also agreed that the license agreement would contain an obligation that we pay milestone payments totaling approximately $7.8 million to Tufts MC upon the achievement of certain development and sales milestones. We would also be obligated to pay a lower milestone payment with respect to each additional licensed product that achieves regulatory approval after

the first licensed product. In addition, we would be required to pay Tufts MC a low single-digit royalty on net sales, with a minimum annual royalty payment starting after the first commercial sale under the license agreement, which would be credited against our royalty obligations. In the event that we sublicense our rights under the license agreement, we would be required to pay Tufts MC a low single-digit or mid teens percentage of revenues received, depending on when the sublicense occurred. We would also be required to make a one-time payment to Tufts MC in the event that we undergo a change of control during term of the license agreement. Our royalty obligations would continue on a country-by-country basis through the last valid claim covering the licensed product or 10 years after the first commercial sale of a licensed product in such country, depending on whether the product was covered by a patent licensed under the agreement. It is possible that we and Tufts MC will not enter into a license agreement despite our mutual obligation to negotiate in good faith or that any license agreement would contain terms different than the pre-established terms described in the Sponsored Research Agreement.

Tufts MC may terminate the Sponsored Research Agreement, as well as any licenses or options granted to us thereunder, if we commit a breach and fail to cure the breach within 30 days of receiving written notice from Tufts MC. We may terminate the agreement upon written notice to Tufts MC if Tufts MC commits a breach and fails to cure the breach within 30 days of receiving written notice from us. We may also terminate the agreement upon 30 days written notice if the principal investigator is unavailable or unable to continue the research for over 90 days, and Tufts MC does not nominate a satisfactory replacement. Unless earlier terminated, the Sponsored Research Agreement continues for 30 days after the principal investigator's delivery of a written final report summarizing the results of the pre-clinical research specified in the Sponsored Research Agreement.

Manufacturing

We do not own or operate, nor do we expect to own or operate, facilities for product manufacturing, storage, distribution or testing. We therefore rely on various third-party manufacturers for the production of our product candidates. TRC105 drug substance for our preclinical studies, Phase 1 clinical trials and Phase 2 clinical trials is manufactured by Lonza, a contract manufacturer that also manufactures approved biologic cancer treatments marketed by other companies and is compliant to U.S. and European regulatory standards.

TRC105 drug substance is produced by Chinese hamster ovary, or CHO, cells developed at Lonza and manufactured using Lonza's proprietary manufacturing and purification processes. Lonza has capabilities to manufacture monoclonal antibodies and other protein therapeutics at the large scale needed for commercialization. We are currently working with Lonza to scale the process to a level that will support commercialization.

TRC105 drug product is produced by an FDA-registered contract manufacturer. The manufacturing process is relatively simple. Drug product is filter-sterilized and aseptically filled into single-use pharmaceutical grade vials and stoppered using an automated filling machine. The final drug product is stored refrigerated until used.

TRC102 drug substance is manufactured through a standard chemical synthesis and may be obtained from multiple manufacturers.

TRC205 is currently produced at research scale using standard antibody production methods. We expect to contract with a third-party manufacturer to prepare production-grade cell lines for the cGMP manufacture of TRC205 prior to initiating clinical trials.

Competition

The development and commercialization of new drugs is highly competitive, and we and our collaborators face competition with respect to each of our product candidates in their target indications. Many of the entities developing and marketing potentially competing products have significantly greater financial, technical and human resources and expertise than we do in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing. Mergers and acquisitions in the biotechnology and pharmaceutical industries may result in even more resources being concentrated among a smaller number of our competitors. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and establishing clinical trial sites and patient registration for clinical trials, as well as in 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 will be reduced or eliminated if our competitors develop and commercialize products that are more effective, have fewer side effects, are more convenient or are less expensive than any products that we may develop.

If our product candidates are approved, they will compete with currently marketed drugs and therapies used for treatment of the following indications, and potentially with drug candidates currently in development for the same indications.

The key competitive factors affecting the success of any approved product will include its efficacy, safety profile, price, method of administration and level of promotional activity.

Oncology Therapies

We are developing TRC105 to be used in combination with VEGF inhibitors for the treatment of cancer. If TRC105 is approved, it could compete with other non-VEGF angiogenesis inhibitors in development, including some that also target the endoglin pathway and have the potential to be combined with VEGF inhibitors or used independently of VEGF inhibitors to inhibit angiogenesis. Acceleron Pharma Inc., Amgen, Inc., MedImmune LLC, OncoMed Pharmaceuticals Inc., Pfizer Inc., Regeneron Pharmaceuticals, Inc. and Roche AG are each developing non-VEGF angiogenesis inhibitors, which are in various phases of clinical development. Pfizer's product candidate targets the endoglin co-receptor ALK1 and is in a Phase 1b clinical trial in combination with Stivarga in patients with hepatocellular carcinoma. Acceleron's product candidate targets the endoglin ligand BMP and is in a Phase 2b clinical trial in combination with Inlyta in patients with renal cell carcinoma and a Phase 1b clinical trial in combination with Nexavar in patients with hepatocellular carcinoma.

We are developing TRC102 to be used in combination with alkylating chemotherapeutics (including Temodar) and antimetabolite chemotherapeutics (including Alimta and Fludara) for the treatment of cancer. If TRC102 is approved, it could compete with other inhibitors of DNA repair. Tesaro, Inc. and AbbVie Inc. are each developing inhibitors of DNA repair that work by a mechanism of action that is distinct from that of TRC102. In addition to the therapies mentioned above, there are many generic chemotherapeutics and other regimens commonly used to treat various types of cancer, including soft tissue sarcoma and glioblastoma.

AMD Therapies

Our partner Santen is developing DE-122 for the treatment of AMD and other eye diseases. If DE-122 is approved in combination with a VEGF inhibitor it could compete with product candidates currently in clinical development that inhibit the function of PDGF or inhibit the function of both VEGF and PDGF, of which Ophthotech Corporation's anti-PDGF agent, Fovista, currently in Phase 3 clinical development in combination with Lucentis, is the most advanced. If

DE-122 is approved as a single agent, it would compete with currently marketed VEGF inhibitors, including Avastin and Lucentis (marketed by Genentech in the United States), and Eylea (marketed by Regeneron in the United States), which are well established therapies and are widely accepted by physicians, patients and third-party payors as the standard of care for the treatment of AMD. In addition, DE-122 could face competition from other VEGF inhibitors in development, such as Allergan's VEGF inhibitor, DARPin, which is in Phase 2 clinical development for administration in a single intraocular injection.

Fibrotic Disease Therapies

If TRC205 is approved for the treatment of diseases characterized by fibrosis, including NASH and IPF, we anticipate that TRC205 could compete with other therapies being developed for the same or similar indications. In addition, TRC205 would compete with therapies currently used off-label to treat fibrotic diseases.

NASH

There are currently no therapeutic products approved by the FDA for the treatment of NASH. Several marketed therapeutics are currently used off-label for this indication, such as insulin sensitizers (including metformin), antihyperlipidemic agents (including gemfibrozil), pentoxifylline and Ursodeoxycholic acid (ursodiol), but they have not been proven effective in the treatment of NASH. We are aware of several companies that have product candidates in Phase 2 clinical development for the treatment of NASH, including Conatus Pharmaceuticals Inc., Galmed Medical Research Ltd., Genfit Corp., Gilead Sciences, Inc., Immuron Ltd., Intercept Pharmaceuticals, Inc., Lumena Pharmaceuticals, Inc., Mochida Pharmaceutical Co., Ltd., NasVax Ltd., Raptor Pharmaceutical Corp. and Takeda Pharmaceutical Company Limited, and there are other companies with candidates in earlier stage programs.

IPF

Esbriet, which is marketed by InterMune, Inc., is approved for the treatment of mild to moderate IPF in the United States, the European Union and other countries. OFEV, which is marketed by Boehringer Ingelheim, is approved for the treatment of IPF in the United States and has been submitted for regulatory approval in the European Union. There are at least eight product candidates in various stages of Phase 2 development being pursued by Biogen Idec., Bristol-Myers Squibb, Celgene Corporation, Fibrogen, Inc., Gilead, Janssen Pharmaceuticals Inc., Novartis AG and Sanofi S.A.

Commercialization

We hold worldwide commercialization rights for our oncology product candidates, TRC105 and TRC102, as well as for our fibrotic disease product candidate TRC205, while Santen holds worldwide commercialization rights for our anti-endoglin antibodies, including TRC105, in the field of ophthalmology. If TRC105 or TRC102 is approved in oncology indications, our plan is to build an oncology-focused specialty sales force in North America to support their commercialization and seek a partner to support commercialization outside of North America. We believe that a specialty sales force will be sufficient to target key prescribing physicians in oncology. We currently do not have any sales or marketing capabilities or experience. We plan to establish the required capabilities within an appropriate time frame ahead of any product approval and commercialization to support a product launch.

Intellectual Property

Our commercial success depends in part on our ability to obtain and maintain proprietary protection for our protein therapeutics, novel biological discoveries, to operate without infringing on the proprietary rights of others and to prevent others from infringing our proprietary rights. Our policy is to seek to protect our proprietary position by, among other methods, filing U.S. and foreign patent applications related to our proprietary technology, inventions and improvements that are important to the development and implementation of our business. We also rely on trade secrets, know-how, continuing technological innovation and potential in-licensing opportunities to develop and maintain our proprietary position. Additionally, we expect to benefit from a variety of statutory frameworks in the United States, Europe, Japan and other countries that relate to the regulation of biosimilar molecules and orphan drug status. These statutory frameworks provide periods of non-patent-based exclusivity for qualifying molecules. See "—Government Regulation."

Our patenting strategy is focused on our protein therapeutics. We seek composition-of-matter and method-of-treatment patents for each such protein in key therapeutic areas. We also seek patent protection with respect to companion diagnostic methods and compositions and treatments for targeted patient populations. We have sought patent protection alone or jointly with our collaborators, as dictated by our collaboration agreements.

Our patent estate as of December 29, 2014, on a worldwide basis, includes 12 issued patents and four pending patent applications in the United States and 16 issued patents and 28 pending patent applications outside the United States, with pending and issued claims relating to our product candidates. Thirteen of our issued patents cover antibodies to endoglin that we have selected as the core focus of our development approach. These figures include in-licensed patents and patent applications to which we hold exclusive commercial rights in non-ophthalmologic fields of use.

Individual patents extend for varying periods of time depending on the date of filing of the patent application or the date of patent issuance and the legal term of patents in the countries in which they are obtained. Generally, patents issued from applications filed in the United States are effective for twenty years from the earliest non-provisional filing date. In addition, in certain instances, a patent term can be extended to recapture a portion of the term effectively lost as a result of the FDA regulatory review period, however, the restoration period cannot be longer than five years and the total patent term including the restoration period must not exceed 14 years following FDA approval. The duration of foreign patents varies in accordance with provisions of applicable local law, but typically is also twenty years from the earliest international filing date. Our issued patents and pending applications with respect to our protein therapeutic candidates will expire on dates ranging from 2016 to 2033, exclusive of possible patent term extensions. However, the actual protection afforded by a patent varies on a product by product basis, from country to country and depends upon many factors, including the type of patent, the scope of its coverage, the availability of extensions of patent term, the availability of legal remedies in a particular country and the validity and enforceability of the patent.

National and international patent laws concerning protein therapeutics remain highly unsettled. No consistent policy regarding the patent-eligibility or the breadth of claims allowed in such patents has emerged to date in the United States, Europe or other countries. Changes in either the patent laws or in interpretations of patent laws in the United States and other countries can diminish our ability to protect our inventions and enforce our intellectual property rights. Accordingly, we cannot predict the breadth or enforceability of claims that may be granted in our patents or in third-party patents. The biotechnology and pharmaceutical industries are characterized by extensive litigation regarding patents and other intellectual property rights. Our ability to maintain and solidify our proprietary position for our drugs and

technology will depend on our success in obtaining effective claims and enforcing those claims once granted. We do not know whether any of the patent applications that we may file or license from third parties will result in the issuance of any patents. The issued patents that we own or may receive in the future, may be challenged, invalidated or circumvented, and the rights granted under any issued patents may not provide us with sufficient protection or competitive advantages against competitors with similar technology. Furthermore, our competitors may be able to independently develop and commercialize similar drugs or duplicate our technology, business model or strategy without infringing our patents. Because of the extensive time required for clinical development and regulatory review of a drug we may develop, it is possible that, before any of our drugs can be commercialized, any related patent may expire or remain in force for only a short period following commercialization, thereby reducing any advantage of any such patent. The patent positions for our most advanced programs are summarized below:

TRC105 Patent Coverage

We hold issued patents covering the TRC105 composition of matter in the United States, Japan, and Canada. The expected expiration date for these composition-of-matter patents is 2016, plus any extensions of term available under the applicable national law.

We hold issued patents covering our humanized and deimmunized endoglin antibodies, including TRC205, in the United States, South Korea, Japan and Australia, and similar patents are pending in many other major jurisdictions worldwide, including Europe, Canada, China, Eurasia, Brazil, Israel and India. The expected expiration date for these composition of matter patents is 2029, exclusive of possible patent term extensions.

We hold an issued patent covering the combination therapy of cancer with TRC105 and VEGF inhibitors in Australia, and similar patents are pending in many other major jurisdictions worldwide, including the United States, Europe, Canada, Japan, China, South Korea, Eurasia, Israel and India. The expected expiration date for these method-of-use patents is 2030, exclusive of possible patent term extensions.

We have filed an international patent application on formulations of endoglin antibodies that is pending entry into the national phase. The expected expiration date for any patent that may issue from this application is 2033, exclusive of possible patent term extensions.

We have filed a provisional patent application directed to uses of endoglin antibodies. The expected expiration date for any patent that may arise from this application is 2035, exclusive of possible patent term extensions.

TRC102 Patent Coverage

We hold issued patents directed to combination of TRC102 and pemetrexed in the United States, Australia, Canada, Japan, South Korea, Mexico, Russia, Singapore, South Africa, Ukraine and the United Kingdom. We also have pending applications in other jurisdictions, including Brazil, China, Europe, Hong Kong, India, Israel and Norway. The expected expiration date for these patents is 2027, plus any extensions of term available under national law.

We hold an issued patent covering the formulation of TRC102 and temozolomide and methods of using the formulation in the United States. The expected expiration date for this patent is 2019, exclusive of possible patent term extensions. We also hold three issued patents covering methods of using TRC102 and other agents in the United States. It is expected that these three patents will also expire in 2019, exclusive of any possible patent term extensions.

We have filed a patent application on further combinations of TRC102 that is pending the United States and Europe. The expected expiration date for these patents is 2031, exclusive of possible patent term extensions.

Trade Secrets

In addition to patents, we rely upon unpatented trade secrets and know-how and continuing technological innovation to develop and maintain our competitive position. We seek to protect our proprietary information, in part, using confidentiality agreements with our commercial partners, collaborators, employees and consultants and invention assignment agreements with our employees. These agreements are designed to protect our proprietary information and, in the case of the invention assignment agreements, to grant us ownership of technologies that are developed through a relationship with a third party. These agreements 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 commercial partners, collaborators, employees and consultants 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.

Government Regulation

The preclinical studies and clinical testing, manufacture, labeling, storage, record keeping, advertising, promotion, export, marketing and sales, among other things, of our product candidates and future products, are subject to extensive regulation by governmental authorities in the United States and other countries. In the United States, pharmaceutical products are regulated by the FDA under the Federal Food, Drug, and Cosmetic Act, of FFDCA, and other laws, including, in the case of biologics, the Public Health Service Act, or PHSA, in addition to the FDA's implementing regulations. We expect TRC105 to be regulated by the FDA as a biologic, which requires the submission of a BLA and approval by the FDA prior to being marketed in the United States. We expect our small molecule product candidate TRC102 to be regulated as a drug and subject to New Drug Application, or NDA, requirements, which are substantially similar to the BLA requirements discussed below. Manufacturers of our product candidates may also be subject to state regulation. Failure to comply with FDA requirements, both before and after product approval, may subject us or our partners, contract manufacturers and suppliers to administrative or judicial sanctions, including FDA refusal to approve applications, warning letters, product recalls, product seizures, total or partial suspension of production or distribution, fines and/or criminal prosecution.

The steps required before a biologic may be approved for marketing of an indication in the United States generally include:

- completion of preclinical laboratory tests, animal studies and formulation studies conducted according to Good Laboratory Practices, or GLPs, and other applicable regulations;
- submission to the FDA of an IND, which must become effective before human clinical trials may commence;
- completion of adequate and well-controlled human clinical trials in accordance with Good Clinical Practices, or GCPs, to establish that the biological product is "safe, pure and potent," which is analogous to the safety and efficacy approval standard for a chemical drug product for its intended use;
- submission to the FDA of a BLA;

- satisfactory completion of an FDA pre-approval inspection of the manufacturing facility or facilities at which the product is produced to assess compliance with applicable current Good Manufacturing Practice requirements, or cGMPs; and

- FDA review of the BLA and issuance of a biologics license which is the approval necessary to market a biologic therapeutic product.

Preclinical studies include laboratory evaluation of product chemistry, toxicity and formulation as well as animal studies to assess the potential safety and efficacy of the biologic candidate. Preclinical studies must be conducted in compliance with FDA regulations regarding GLPs. The results of the preclinical tests, together with manufacturing information and analytical data, are submitted to the FDA as part of an IND. Some preclinical testing may continue even after the IND is submitted. In addition to including the results of the preclinical testing, the IND will also include a protocol detailing, among other things, the objectives of the clinical trial, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated if the first phase or phases of the clinical trial lends themselves to an efficacy determination. The IND will automatically become effective 30 days after receipt by the FDA, unless the FDA within the 30-day time period places the IND on clinical hold because of its concerns about the drug candidate or the conduct of the trial described in the clinical protocol included in the IND. The FDA can also place the IND on clinical hold at any time during drug development for safety concerns related to the investigational drug or to the class of products to which it belongs. The IND sponsor and the FDA must resolve any outstanding concerns before clinical trials can proceed.

All clinical trials must be conducted under the supervision of one or more qualified principal investigators in accordance with GCPs. They must be conducted under protocols detailing the objectives of the applicable phase of the trial, dosing procedures, research subject selection and exclusion criteria and the safety and effectiveness criteria to be evaluated. Each protocol must be submitted to the FDA as part of the IND, and progress reports detailing the status of the clinical trials must be submitted to the FDA annually. Sponsors also must timely report to the FDA serious and unexpected adverse reactions, any clinically important increase in the rate of a serious suspected adverse reaction over that listed in the protocol or investigator's brochure, or any findings from other studies or animal or in vitro testing that suggest a significant risk in humans exposed to the drug. An institutional review board, or IRB, at each institution participating in the clinical trial must review and approve the protocol before a clinical trial commences at that institution, approve the information regarding the trial and the consent form that must be provided to each research subject or the subject's legal representative, and monitor the study until completed.

Clinical trials are typically conducted in three sequential phases, but the phases may overlap and different trials may be initiated with the same drug candidate within the same phase of development in similar or differing patient populations. Phase 1 clinical trials may be conducted in a limited number of patients, but are usually conducted in healthy volunteer subjects. The drug candidate is initially tested for safety and, as appropriate, for absorption, metabolism, distribution, excretion, pharmacodynamics and pharmacokinetics.

Phase 2 usually involves trials in a larger, but still limited, patient population to evaluate preliminarily the efficacy of the drug candidate for specific, targeted indications to determine dosage tolerance and optimal dosage and to identify possible short-term adverse effects and safety risks.

Phase 3 trials are undertaken to further evaluate clinical efficacy of a specific endpoint and to test further for safety within an expanded patient population at geographically dispersed clinical trial sites. Phase 1, Phase 2, or Phase 3 testing might not be completed successfully within any specific time period, if at all, with respect to any of our product candidates. Results

from one trial are not necessarily predictive of results from later trials. Furthermore, the FDA or the sponsor may suspend clinical trials at any time on various grounds, including a finding that the subjects or patients are being exposed to an unacceptable health risk. 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 drug candidate has been associated with unexpected serious harm to patients.

The FFDCA permits the FDA and an IND sponsor to agree in writing on the design and size of clinical studies intended to form the primary basis of a claim of effectiveness in a BLA or NDA. This process is known as a Special Protocol Assessment, or SPA. An SPA agreement may not be changed by the sponsor or the FDA after the trial begins except with the written agreement of the sponsor and the FDA, or if the FDA determines that a substantial scientific issue essential to determining the safety or effectiveness of the drug was identified after the testing began. For certain types of protocols, including carcinogenicity protocols, stability protocols, and Phase 3 protocols for clinical trials that will form the primary basis of an efficacy claim, the FDA has agreed under its performance goals associated with the Prescription Drug User Fee Act, or PDUFA, to provide a written response on most protocols within 45 days of receipt. However, the FDA does not always meet its PDUFA goals, and additional FDA questions and resolution of issues leading up to an SPA agreement may result in the overall SPA process being much longer, if an agreement is reached at all.

The results of the preclinical studies and clinical trials, together with other detailed information, including information on the manufacture and composition of the product, are submitted to the FDA as part of a BLA requesting approval to market the drug candidate for a proposed indication. Under the PDUFA, as re-authorized most recently in July 2012, the fees payable to the FDA for reviewing a BLA, as well as annual fees for commercial manufacturing establishments and for approved products, can be substantial. The fees typically increase each year. Each BLA submitted to the FDA for approval is reviewed for administrative completeness and reviewability within 60 days following receipt by the FDA of the application. If the BLA is found complete, the FDA will file the BLA, triggering a full review of the application. The FDA may refuse to file any BLA that it deems incomplete or not properly reviewable at the time of submission. The FDA's established goal is to review 90% of priority BLA applications within six months after the application is accepted for filing and 90% of standard BLA applications within 10 months of the acceptance date, whereupon a review decision is to be made. The FDA, however, may not approve a drug candidate within these established goals and its review goals are subject to change from time to time. Further, the outcome of the review, even if generally favorable, may not be an actual approval but a "complete response letter" that describes additional work that must be done before the application can be approved. Before approving a BLA, the FDA may inspect the facility or facilities at which the product is manufactured and will not approve the product unless the facility complies with cGMPs. The FDA may deny approval of a BLA if applicable statutory or regulatory criteria are not satisfied, or may require additional testing or information, which can extend the review process. FDA approval of any application may include many delays or never be granted. If a product is approved, the approval may impose limitations on the uses for which the product may be marketed, may require that warning statements be included in the product labeling, may require that additional studies be conducted following approval as a condition of the approval, and may impose restrictions and conditions on product distribution, prescribing, or dispensing in the form of a Risk Evaluation and Mitigation Strategy, or REMS, or otherwise limit the scope of any approval. The FDA must approve a BLA supplement or a new BLA before a product may be marketed for other uses or before certain manufacturing or other changes may be made. Further post-marketing testing and surveillance to monitor the safety or efficacy of a product is required. Also, product approvals may be withdrawn if compliance with regulatory standards is not maintained or if safety or manufacturing problems occur following initial marketing. In addition, new government

requirements may be established that could delay or prevent regulatory approval of our product candidates under development.

As part of the recently-enacted Patient Protection and Affordable Care Act of 2010, as amended by the Health Care Education Reconciliation Act, under the subtitle of Biologics Price Competition and Innovation Act of 2009, or the BPCIA, a statutory pathway has been created for licensure, or approval, of biological products that are biosimilar to, and possibly interchangeable with, earlier biological products licensed under the PHSA. Also under the BPCIA, innovator manufacturers of original reference biological products are granted 12 years of exclusivity before biosimilars can be approved for marketing in the United States. The objectives of the BPCIA are conceptually similar to those of the Drug Price Competition and Patent Term Restoration Act of 1984, commonly referred to as the "Hatch-Waxman Act," which established abbreviated pathways for the approval of drug products. The implementation of an abbreviated approval pathway for biological products is under the direction of the FDA and is currently being developed. In February 2012 and February 2013, the FDA issued several draft guidances for industry related to the BPCIA, addressing scientific, quality and procedural issues relevant to an abbreviated application for a biosimilar product. In June 2014, the FDA also released a draft guidance document intended to assist sponsors developing biological products and BLA holders in providing information and data to the FDA to determine the date of first licensure for a reference product as contemplated in the BPCIA. The approval of a biologic product biosimilar to one of our products could have a material adverse impact on our business as it may be significantly less costly to bring to market and may be priced significantly lower than our products.

Both before and after the FDA approves a product, the manufacturer and the holder or holders of the BLA for the product are subject to comprehensive regulatory oversight. For example, quality control and manufacturing procedures must conform, on an ongoing basis, to cGMP requirements, and the FDA periodically inspects manufacturing facilities to assess compliance with cGMPs. Accordingly, manufacturers must continue to spend time, money and effort to maintain cGMP compliance.

Other Healthcare Laws

Although we currently do not have any products on the market, we may be subject to additional healthcare regulation and enforcement by the federal government and by authorities in the states and foreign jurisdictions in which we conduct our business. Such laws include, without limitation, state and federal anti-kickback, fraud and abuse, false claims, privacy and security and physician sunshine laws and regulations, many of which may become more applicable if our product candidates are approved and we begin commercialization. If our operations are found to be in violation of any of such laws or any other governmental regulations that apply to us, we may be subject to penalties, including, without limitation, civil and criminal penalties, damages, fines, the curtailment or restructuring of our operations, exclusion from participation in federal and state healthcare programs and imprisonment, any of which could adversely affect our ability to operate our business and our financial results.

Orphan Drug Act

The Orphan Drug Act provides incentives to manufacturers to develop and market drugs for rare diseases and conditions affecting fewer than 200,000 persons in the United States at the time of application for orphan drug designation. Orphan drug designation must be requested before submitting a BLA. Orphan drug designation does not convey any advantage in, or shorten the duration of, the regulatory review and 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 holder of the approval is entitled to a seven-year exclusive marketing

period in the United States for that product except in very limited circumstances. For example, a drug that the FDA considers to be clinically superior to, or different from, another approved orphan drug, even though for the same indication, may also obtain approval in the United States during the seven-year exclusive marketing period. In addition, holders of exclusivity for orphan drugs are expected to assure the availability of sufficient quantities of their orphan drugs to meet the needs of patients. Failure to do so could result in the withdrawal of marketing exclusivity for the drug.

Legislation similar to the Orphan Drug Act has been enacted outside the United States, including in the European Union and Japan. The orphan legislation in the European Union is available for therapies addressing chronic debilitating or life-threatening conditions that affect five or fewer out of 10,000 persons or are financially not viable to develop. The market exclusivity period is for ten years, although that period can be reduced to six years if, at the end of the fifth year, available evidence establishes that the product is sufficiently profitable not to justify maintenance of market exclusivity. The market exclusivity may be extended to 12 years if sponsors complete a pediatric investigation plan agreed upon with the relevant committee of the European Medicines Agency. Orphan legislation in Japan similarly provides for ten years of marketing exclusivity for drugs that are approved for the treatment of rare diseases and conditions.

Exclusivity

TRC105 and TRC205, as new biological products, benefit from the data exclusivity provisions legislated in the United States, the European Union and Japan. All three regions effectively provide a period of data exclusivity to innovator biologic products. U.S. legislation provides a 12-year period of data exclusivity from the date of first licensure of a reference biologic product. EU legislation provides a period of 10 to 11 years and Japan legislation provides a period of 8 years during which companies cannot be granted approval as generic drugs to approved biologic therapies. Protection from generic competition is also available for new chemical entities, including potentially the small molecule TRC102, in the United States for 5 years, in the European Union for 10 to 11 years and in Japan for 8 years.

Exclusivity in the European Union

The European Union has led the way among the International Conference on Harmonisation regions in establishing a regulatory framework for biosimilar products. The marketing authorization of generic medicinal products and similar biological medicinal products are governed in the European Union by Article 10(1) of Directive 2001/83/EC (2001). Unlike generic medicinal products, which only need to demonstrate bioequivalence to an authorized reference product, similar biological medicinal products are required to submit preclinical and clinical data, the type and quantity of which is dictated by class and product specific guidelines. In order to submit a marketing authorization for a similar biological medicinal product, the reference product must have been authorized for marketing in the European Union for at least 8 years. Biosimilars can only be authorized for use once the period of data exclusivity on the biological reference medicine has expired. In general, this means that the biological reference medicine must have been authorized for at least 10 years before a similar biological medicine can be made available by another company. The 10-year period can be extended to a maximum of 11 if, during the first 8 years of those 10 years, the marketing authorization holder obtains an authorization for one or more new therapeutic indications which, during the scientific evaluation prior to their authorization are held to bring a significant clinical benefit in comparison to existing therapies.

Many EU countries have banned interchangeability of biosimilars with their reference products to ensure adequate characterization of the safety profile of the biosimilar and to enable comparison to that of reference product.

Exclusivity in Japan

In 2009, Japan's Ministry of Health, Labour and Welfare, or MHLW, and Pharmaceuticals and Medical Device Agency, or PMDA, issued the first Japanese guidance on biosimilars. The guideline (currently available only in Japanese), which shares common key features to EU guidelines, outlines the nonclinical, clinical and CMC requirements for biosimilar applications and describes the review process, naming conventions and application fees. To date, two biosimilar products have been approved in Japan. In June 2009, Novartis' biosimilar of somatropin became the first biosimilar approved in Japan. In January, 2010, Kissei's biosimilar of epoetin alfa was approved.

Japan does not grant exclusivity to pharmaceutical products; however, the country does have a Post Marketing Surveillance, or PMS, system that affects the timing of generic entry and, in effect, provides a period of market exclusivity to innovator products. This system allows safety data to be acquired for each product. A PMS period is set for most of new drug approvals, and until this period is over, generic companies cannot submit their applications for drug approvals as generic drugs. Recently, this period was extended to 8 years for all new drug approvals. Japan's regulations do not allow currently for interchangeability of biosimilars with their reference products.

Expedited Review and Approval

The FDA has various programs, including Fast Track, priority review, and accelerated approval, which are intended to expedite or simplify the process for reviewing drugs and biologics, and/or provide for the approval of a drug or biologic on the basis of a surrogate endpoint. Even if a drug qualifies for one or more of these programs, the FDA may later decide that the drug no longer meets the conditions for qualification or that the time period for FDA review or approval will be shortened. Generally, drugs that are eligible for these programs are those for serious or life-threatening conditions, those with the potential to address unmet medical needs and those that offer meaningful benefits over existing treatments. For example, Fast Track is a process designed to facilitate the development and expedite the review of drugs to treat serious or life-threatening diseases or conditions and fill unmet medical needs. Priority review is designed to give drugs that offer major advances in treatment or provide a treatment where no adequate therapy exists an initial review within six months as compared to a standard review time of ten months. Although Fast Track and priority review do not affect the standards for approval, the FDA will attempt to facilitate early and frequent meetings with a sponsor of a Fast Track designated drug and expedite review of the application for a drug designated for priority review. Accelerated approval provides for an earlier approval for a new drug that is intended to treat a serious or life-threatening disease or condition and that fills an unmet medical need based on a surrogate endpoint. A surrogate endpoint is a laboratory measurement or physical sign used as an indirect or substitute measurement representing a clinically meaningful outcome. As a condition of approval, the FDA may require that a sponsor of a drug candidate receiving accelerated approval perform post-marketing clinical trials to confirm the clinically meaning full outcome as predicted by the surrogate marker trial.

In June 2013, the FDA published a draft Guidance for Industry entitled, "Expedited Programs for Serious Conditions—Drugs and Biologics" which provides guidance on FDA programs that are intended to facilitate and expedite development and review of new drugs as well as threshold criteria generally applicable to concluding that a drug is a candidate for these expedited development and review programs. In addition to the Fast Track, accelerated

approval and priority review programs discussed above, the FDA also provided guidance on a new program for Breakthrough Therapy designation. A request for Breakthrough Therapy designation should be submitted concurrently with, or as an amendment to an IND. FDA has already granted this designation and approved Breakthrough Therapy designated drugs.

Pediatric Exclusivity and Pediatric Use

Under the Best Pharmaceuticals for Children Act, certain drugs may obtain an additional six months of exclusivity, if the sponsor submits information requested in writing by the FDA, or a Written Request, relating to the use of the active moiety of the drug in children. The FDA may not issue a Written Request for studies on unapproved or approved indications or where it determines that information relating to the use of a drug in a pediatric population, or part of the pediatric population, may not produce health benefits in that population.

We have not received a Written Request for such pediatric studies, although we may ask the FDA to issue a Written Request for such studies in the future. To receive the six-month pediatric market exclusivity, we would have to receive a Written Request from the FDA, conduct the requested studies in accordance with a written agreement with the FDA or, if there is no written agreement, in accordance with commonly accepted scientific principles, and submit reports of the studies. A Written Request may include studies for indications that are not currently in the labeling if the FDA determines that such information will benefit the public health. The FDA will accept the reports upon its determination that the studies were conducted in accordance with and are responsive to the original Written Request or commonly accepted scientific principles, as appropriate, and that the reports comply with the FDA's filing requirements.

In addition, the Pediatric Research Equity Act, or PREA, requires a sponsor to conduct pediatric studies for most drugs and biologicals, for a new active ingredient, new indication, new dosage form, new dosing regimen or new route of administration. Under PREA, original NDAs, BLAs and supplements thereto must contain a pediatric assessment unless the sponsor has received a deferral or waiver. The required assessment must include the evaluation of the safety and effectiveness of the product for the claimed indications in all relevant pediatric subpopulations and support dosing and administration for each pediatric subpopulation for which the product is safe and effective. The sponsor or FDA may request a deferral of pediatric studies for some or all of the pediatric subpopulations. A deferral may be granted for several reasons, including a finding that the drug or biologic is ready for approval for use in adults before pediatric studies are complete or that additional safety or effectiveness data needs to be collected before the pediatric studies begin. The FDA must send a non-compliance letter to any sponsor that fails to submit the required assessment, keep a deferral current or fails to submit a request for approval of a pediatric formulation.

Coverage and Reimbursement

Significant uncertainty exists as to the coverage and reimbursement status of any product candidates for which we obtain regulatory approval. In both domestic and foreign markets, sales and reimbursement of any approved products will depend, in part, on the extent to which third-party payors, such as government health programs, commercial insurance and managed healthcare organizations provide coverage, and establish adequate reimbursement levels for, such products. Third-party payors are increasingly challenging the prices charged for medical products and services and imposing controls to manage costs. Third-party payors may limit coverage to specific products on an approved list, or also known as a formulary, which might not include all of the FDA-approved products for a particular indication. Additionally, we may need to conduct expensive pharmacoeconomic studies in order to demonstrate the cost-effectiveness of our products. If third-party payors do not consider our products to be cost-effective compared

to other therapies, the payors may not cover our products after approved as a benefit under their plans or, if they do, the level of reimbursement may not be sufficient to allow us to sell our products on a profitable basis.

The containment of healthcare costs also has become a priority of federal and state governments and the prices of drugs have been a focus in this effort. Governments have shown significant interest in implementing cost-containment programs, including price controls, restrictions on reimbursement and requirements for substitution of generic products. Adoption of price controls and cost-containment measures, and adoption of more restrictive policies in jurisdictions with existing controls and measures, could further limit our net revenue and results.

Outside the United States, ensuring adequate coverage and payment for our products will face challenges. Pricing of prescription pharmaceuticals is subject to governmental control in many countries. Pricing negotiations with governmental authorities can extend well beyond the receipt of regulatory marketing approval for a product and may require us to conduct a clinical trial that compares the cost effectiveness of our product candidates or products to other available therapies. The conduct of such a clinical trial could be expensive and result in delays in our commercialization efforts. Third-party payors are challenging the prices charged for medical products and services, and many third-party payors limit reimbursement for newly-approved health care products. Recent budgetary pressures in many European Union countries are also causing governments to consider or implement various cost-containment measures, such as price freezes, increased price cuts and rebates. If budget pressures continue, governments may implement additional cost-containment measures. Cost-control initiatives could decrease the price we might establish for products that we may develop or sell, which would result in lower product revenues or royalties payable to us. There can be no assurance that any country that has price controls or reimbursement limitations for pharmaceutical products will allow favorable reimbursement and pricing arrangements for any of our products.

Healthcare Reform

There have been a number of federal and state proposals during the last few years regarding the pricing of pharmaceutical and biological products, government control and other changes to the healthcare system of the United States. It is uncertain what legislative proposals will be adopted or what actions federal, state or private payors for medical goods and services may take in response to any healthcare reform proposals or legislation. We cannot predict the effect medical or healthcare reforms may have on our business, and no assurance can be given that any such reforms will not have a material adverse effect.

By way of example, the United States and state governments continue to propose and pass legislation designed to reduce the cost of healthcare. In March 2010, the United States Congress enacted the Affordable Care Act, which, among other things, includes changes to the coverage and payment for drug products under government health care programs. The Affordable Care Act:

- expanded manufacturers' rebate liability under the Medicaid Drug Rebate Program by increasing the minimum rebate for both branded and generic drugs and revising the definition of "average manufacturer price," or AMP, for calculating and reporting Medicaid drug rebates on outpatient prescription drug prices;

- addressed a new methodology by which rebates owed by manufacturers under the Medicaid Drug Rebate Program are calculated for drugs that are inhaled, infused, instilled, implanted or injected;

- extended Medicaid drug rebates, previously due only on fee-for-service utilization, to Medicaid managed care utilization, and created an alternate rebate formula for new

formulations of certain existing products that is intended to increase the amount of rebates due on those drugs;

- expanded the types of entities eligible for the 340B drug discount program that mandates discounts to certain hospitals, community centers and other qualifying providers. With the exception of children's hospitals, these newly eligible entities will not be eligible to receive discounted 340B pricing on orphan drugs. In addition, because 340B pricing is determined based on AMP and Medicaid drug rebate data, the revisions to the Medicaid rebate formula and AMP definition described above could cause the required 340B discounts to increase; and

- established the Medicare Part D coverage gap discount program by requiring manufacturers to provide a 50% point-of-sale-discount off the negotiated price of applicable brand drugs to eligible beneficiaries during their coverage gap period as a condition for the manufacturers' outpatient drugs to be covered under Medicare Part D.

Adoption of other new legislation at the federal or state level could further limit reimbursement for pharmaceuticals, including our product candidates if approved.

Foreign Regulation

In addition to regulations in the United States, we will be subject to a variety of foreign regulations governing clinical trials and commercial sales and distribution of our product candidates. Whether or not we obtain FDA approval for a product candidate, we must obtain approval from the comparable regulatory authorities of foreign countries or economic areas, such as the European Union, before we may commence clinical trials or market products in those countries or areas. The approval process and requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from place to place, and the time may be longer or shorter than that required for FDA approval.

Certain countries outside of the United States have a process that requires the submission of a clinical trial application much like an IND prior to the commencement of human clinical trials. In Europe, for example, a clinical trial application, or CTA, must be submitted to the competent national health authority and to independent ethics committees in each country in which a company intends to conduct clinical trials. Once the CTA is approved in accordance with a country's requirements, clinical trial development may proceed in that country. In all cases, the clinical trials must be conducted in accordance with good clinical practices, or GCPs and other applicable regulatory requirements.

Under European Union regulatory systems, a company may submit marketing authorization applications either under a centralized or decentralized procedure. The centralized procedure is compulsory for medicinal products produced by biotechnology or those medicinal products containing new active substances for specific indications such as the treatment of AIDS, cancer, neurodegenerative disorders, diabetes, viral diseases and designated orphan medicines, and optional for other medicines which are highly innovative. Under the centralized procedure, a marketing application is submitted to the European Medicines Agency where it will be evaluated by the Committee for Medicinal Products for Human Use and a favorable opinion typically results in the grant by the European Commission of a single marketing authorization that is valid for all European Union member states within 67 days of receipt of the opinion. The initial marketing authorization is valid for five years, but once renewed is usually valid for an unlimited period. The decentralized procedure provides for approval by one or more "concerned" member states based on an assessment of an application performed by one member state, known as the "reference" member state. Under the decentralized approval procedure, an applicant submits an application, or dossier, and related materials to the reference member state and concerned member states. The reference member state prepares a

draft assessment and drafts of the related materials within 120 days after receipt of a valid application. Within 90 days of receiving the reference member state's assessment report, each concerned member state must decide whether to approve the assessment report and related materials. If a member state does not recognize the marketing authorization, the disputed points are eventually referred to the European Commission, whose decision is binding on all member states.

As in the United States, we may apply for designation of a product as an orphan drug for the treatment of a specific indication in the European Union before the application for marketing authorization is made. Orphan drugs in Europe enjoy economic and marketing benefits, including up to 10 years of market exclusivity for the approved indication unless another applicant can show that its product is safer, more effective or otherwise clinically superior to the orphan designated product.

Additional Regulation

We are also subject to regulation under the Occupational Safety and Health Act, the Environmental Protection Act, the Toxic Substances Control Act, the Resource Conservation and Recovery Act and other present and potential federal, state or local regulations. These and other laws govern our use, handling and disposal of various biological and chemical substances used in, and waste generated by our operations. Our research and development involves the controlled use of hazardous materials, chemicals and viruses. Although we believe that our safety procedures for handling and disposing of such materials comply with the standards prescribed by state and federal regulations, the risk of accidental contamination or injury from these materials cannot be completely eliminated. In the event of such an accident, we could be held liable for any damages that result and any such liability could exceed our resources.

Employees

As of December 31, 2014, we had 13 full-time employees and one part-time employee, eleven of whom are involved in research, development or manufacturing, and two of whom have Ph.D. or M.D. degrees. We have no collective bargaining agreements with our employees and we have not experienced any work stoppages. We consider our relations with our employees to be good.

Facilities

Our principal executive offices are located at 8910 University Center Lane, Suite 700, San Diego, California 92122, in a facility we lease encompassing 5,034 square feet of office space. Our lease expires in April 2017. We believe our facilities are adequate for our current needs and that suitable additional substitute space would be available if needed.

Legal Proceedings

From time to time, we may be involved in various claims and legal proceedings relating to claims arising out of our operations. We are not currently a party to any legal proceedings that, in the opinion of our management, are likely to have a material adverse effect on our business. Regardless of outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

MANAGEMENT

Executive Officers, Key Employees and Directors

The following table sets forth certain information regarding our current executive officers, key employees and directors as of December 31, 2014:

Name	Age	Position(s)
Executive Officers		
Charles P. Theuer, M.D., Ph.D.	51	President, Chief Executive Officer and Director
H Casey Logan, M.B.A.	42	Chief Business Officer
Patricia Bitar, CPA	56	Chief Financial Officer
Key Employees		
Bonne Adams, M.B.A.	38	Senior Vice President of Clinical Operations
Sharon Real, Ph.D.	51	Senior Vice President of Product Development
Non-Employee Directors		
Kenji Harada, Ph.D.(2)	54	Director
Hironori Hozoji(1)(3)	53	Director
William R. LaRue(1)(2)	63	Director
Martin A. Mattingly, Pharm.D.(3)	57	Director
Alfred Scheidegger, Ph.D.(4)	57	Director
J. Rainer Twiford, J.D., Ph.D.(1)	62	Director
Paul Walker(2)(3)	40	Director

(1) Member of the compensation committee.
(2) Member of the audit committee.
(3) Member of the nominating and corporate governance committee.
(4) Dr. Scheidegger will resign from our board of directors contingent upon and effective immediately prior to the effectiveness of the registration statement of which this prospectus is a part.

Executive Officers

Charles P. Theuer, M.D., Ph.D. Dr. Theuer has served as our President, Chief Executive Officer and a member of our board of directors since July 2006. From 2004 to 2006, Dr. Theuer was the Chief Medical Officer and Vice President of Clinical Development at TargeGen, Inc., a biotechnology company. Prior to joining TargeGen, Inc., Dr. Theuer was Director of Clinical Oncology at Pfizer, Inc., a pharmaceutical corporation, from 2003 to 2004. Dr. Theuer has also held senior positions at IDEC Pharmaceuticals Corp. from 2002 to 2003 and at the National Cancer Institute from 1991 to 1993. In addition, he has held academic positions at the University of California, Irvine, where he was Assistant Professor in the Division of Surgical Oncology and Department of Medicine. Dr. Theuer received a B.S. from the Massachusetts Institute of Technology, an M.D. from the University of California, San Francisco, and a Ph.D. from the University of California, Irvine. He completed a general surgery residency program at Harbor-UCLA Medical Center and was board certified in general surgery in 1997.

Our board of directors believes Dr. Theuer's expertise and experience in the biotechnology industry, his medical training and his experience with our company provide him with the qualifications and skills to serve on our board of directors.

H Casey Logan, M.B.A. Mr. Logan has served as our Chief Business Officer since February 2013. Prior to joining us, Mr. Logan was the Senior Vice President, Corporate Development at RuiYi, Inc. (formerly Anaphore Inc.), a biotechnology company, from January 2011 to February 2013. From 2007 to December 2010, Mr. Logan served as the Vice President, Corporate Development & Strategic Planning at Anadys Pharmaceuticals, Inc. (acquired by Roche), a

biopharmaceutical company. From 2001 to 2007, he was with Eli Lilly and Company, a pharmaceutical company, in Indianapolis, Indiana, in the corporate business development group. Prior to joining Eli Lilly and Company, Mr. Logan was an officer in the U.S. Naval Nuclear Propulsion Program from 1993 to 1999. Mr. Logan received an M.B.A. from the Kellogg School of Management at Northwestern University and a B.S.E. in chemical engineering from the University of Michigan.

Patricia Bitar, CPA. Ms. Bitar joined us as our Chief Financial Officer in September 2014. Prior to joining us, Ms. Bitar served in roles of increasing responsibility at NuVasive, Inc., a medical device company, serving most recently as Vice President and Corporate Controller from April 2011 to April 2014 and as the Senior Director of Financial Reporting from November 2009 to March 2011. From 2008 to October 2009 and during various periods of 1998 to 2006, Ms. Bitar provided independent financial consulting for a variety of companies, primarily in the biotechnology and electronics industries. From 2006 to 2008, Ms. Bitar served as the Corporate Controller at Orexigen Therapeutics, Inc., a biopharmaceutical company, where she was also the Senior Director of Financial Reporting from 2007 to 2008 and the Director of Financial Reporting from 2006 to 2007. From 1984 to 1991 and 1994 to 1998, Ms. Bitar worked in the Audit Department at Ernst & Young, where from 1988, she served as a Senior Audit Manager, working primarily with clients in the technology and biotechnology industries. Ms. Bitar is a certified public accountant and received an M.A.I.S. from the University of West Florida and a B.S. in Business Administration (Accounting) from Old Dominion University.

Key Employees

Bonne Adams, M.B.A. Ms. Adams joined us as our Vice President of Clinical Operations in August 2006 and was promoted to Senior Vice President of Clinical Operations in July 2014. Prior to joining us, Ms. Adams was a Manager of Clinical Operations at Pfizer, Inc., a pharmaceutical corporation, from 2004 to 2006 and at Biogen Idec, Inc., a biotechnology company, from 2002 to 2004. Ms. Adams has managed both early and late-stage oncology studies of small molecules as well as biologics in the areas of lymphoma, lung, colorectal, ovarian, kidney, sarcoma and breast cancers. From 2000 to 2002, she managed non-oncology programs at Quintiles Inc., a service provider for biopharmaceutical and health sciences companies, including studies in the areas of allergy and pulmonary disease. Ms. Adams received a B.A. in Kinesiology and Biology from the University of Colorado and an M.B.A. in Technology Management from The University of Phoenix.

Sharon Real, Ph.D. Dr. Real joined us as our Vice President of Product Development in October 2006 and was promoted to Senior Vice President of Product Development in July 2014. Prior to joining us, Dr. Real served in roles of increasing responsibility at Pfizer, Inc., a pharmaceutical corporation, from 2000 to 2006, culminating in the position of Director of Regulatory Chemistry, Manufacturing and Controls. Before that, Dr. Real was Manager, Technical Operations at Ligand Pharmaceuticals Incorporated, a pharmaceutical company, from 1999 to 2000. From 1994 to 1999, Dr. Real served in various positions at Agouron Pharmaceuticals, Inc., a biotechnology company, most recently as Manager of Regulatory Chemistry, Manufacturing and Controls. From 1991 to 1994 she was in Chemical Process Research at Bristol-Myers Squibb Co., a global biopharmaceutical company. Dr. Real received a B.S. in Chemistry from Stanford University and a Ph.D. in Organic Chemistry from the University of California, Los Angeles.

Non-Employee Directors

Kenji Harada, Ph.D. Dr. Harada has served as a member of our board of directors since March 2011. He has served as a Senior Manager and Principal of JAFCO Co. Ltd., a Tokyo-based venture capital and private equity firm, since 2004. Prior to joining JAFCO Co. Ltd., Dr. Harada

held positions of increasing responsibility within Toray Industries, Inc., an integrated chemical industry group, from 1990 to 2004, most recently as manager for collaborative research agreements with a number of leading Japanese academic institutions and biotechnology companies. From May 2012 to December 2013, Dr. Harada served as a member of the board of directors of Eleven Biotherapeutics, Inc., a biopharmaceutical company. Dr. Harada received a B.S., an M.S. and a Ph.D. in pharmacology from the University of Tokyo.

Our board of directors believes that Dr. Harada's extensive experience in the life sciences and venture capital industries and his educational background provide him with the qualifications and skills to serve on our board of directors.

Hironori Hozoji. Mr. Hozoji has served as a member of our board of directors since March 2011. He has served as an Investment Officer at JAFCO Life Science Investment, a private investment firm and a subsidiary of JAFCO Co., Ltd., a Tokyo-based venture capital and private equity firm, since July 2002. Before that, Mr. Hozoji was Senior Manager of the Life Science Investment Team at JAFCO Co., Ltd. from April 2001 to June 2002. Mr. Hozoji served on the board of directors of Eagle Pharmaceuticals, Inc., a specialty pharmaceutical company, from April 2013 to October 2013; KYTHERA Biopharmaceuticals, Inc., a clinical-stage biopharmaceutical company, from May 2008 to December 2012; and Affymax, Inc., a biopharmaceutical company, from July 2005 to February 2007. Mr. Hozoji is also a former board member of Agensys, Inc., Artisan Pharma, Inc., LigoCyte Pharmaceuticals, Inc. and Singulex Inc. Mr. Hozoji received a B.A. from Meiji University's School of Business Administration in Tokyo, Japan.

Our board of directors believes that Mr. Hozoji's extensive experience in the life sciences and venture capital industries and his experience as a director of other public and private companies provide him with the qualifications and skills to serve on our board of directors.

William R. LaRue. Mr. LaRue has served as a member of our board of directors since July 2014. He served as the Chief Financial Officer, Senior Vice President and Treasurer at Cadence Pharmaceuticals, Inc., a biopharmaceutical company, from June 2006 until its acquisition by Mallinckrodt plc in March 2014, and from April 2007 to March 2014, he served as the Assistant Secretary at Cadence. Prior to joining Cadence, Mr. LaRue was the Senior Vice President and Chief Financial Officer of Micromet, Inc. (formerly CancerVax Corporation), a biotechnology company, from 2001 to 2006. From 2000 to 2001, Mr. LaRue served as the Executive Vice President and Chief Financial Officer of eHelp Corporation, a provider of user assistance software. Previously, he was the Vice President and Treasurer of Safeskin Corporation, a medical device company, from 1997 to 2000 and the Treasurer of GDE Systems, Inc., a high technology electronic systems company from 1993 to 1997. Mr. LaRue currently serves on the board of directors of Neurelis, Inc., a specialty pharmaceutical company, a position he has held since October 2008. Mr. LaRue received a B.S. in business administration and an M.B.A. from the University of Southern California.

Our board of directors believes that Mr. LaRue's extensive experience in finance, his experience as an executive officer of a public company in our industry and his educational background provide him with the qualifications and skills to serve on our board of directors.

Martin A. Mattingly, Pharm.D. Dr. Mattingly has served as a member of our board of directors since December 2014. Dr. Mattingly has been a member of Tech Coast Angels, an investment group, since August 2012. Previously, Dr. Mattingly served as the Chief Executive Officer of Trimeris, Inc., a biopharmaceutical company, from November 2007 until January 2012 following its merger with Synageva BioPharma Corp in November 2011. He also served on the board of directors of Trimeris, Inc. from November 2007 until November 2011. He has been a director of OncoGenex Pharmaceuticals, Inc., a biopharmaceutical company, since June 2010.

From 2005 to 2007, Dr. Mattingly served as President and Chief Executive Officer of Ambrx, Inc., a biopharmaceutical company. From 2003 to 2005, Dr. Mattingly served as Executive Vice President of CancerVax, Inc., a pharmaceutical company, and as Chief Operating Officer from June 2005 to September 2005. From 1996 to 2003, Dr. Mattingly provided senior leadership in various management positions at Agouron Pharmaceuticals, Inc. and Pfizer, Inc., a pharmaceutical company. From 1983 to 1996, Dr. Mattingly held various positions in oncology marketing and sales management at Eli Lilly and Company, a biopharmaceutical company. Dr. Mattingly received a Doctor of Pharmacy degree from the University of Kentucky.

Our board of directors believes that Dr. Mattingly's experience in the biotechnology and pharmaceuticals industries, his educational background and his experience as a public company director provide him with the qualifications and skills to serve on our board of directors.

Alfred Scheidegger, Ph.D. Dr. Scheidegger has served as a member of our board of directors since June 2012. Dr. Scheidegger has served as the Founding Partner and Chief Executive Officer of Nextech Invest Ltd. (formerly Nextech Venture Ltd.), an investment advisor and management company he founded in 1998, since May 1998, and the Chairman of Nextech Holding AG since December 2009. He has been a member of the board of directors of Palyon Medical Corporation, a medical device company, since July 2013 and was been an observer of the Palyon board from May 2009 to July 2013. Dr. Scheidegger has served as a member of the board of directors of Dottikon ES Holding AG since July 2011. In addition, Dr. Scheidegger has been an observer of the board of directors of MolecularMD Corp., a molecular diagnostics company, since June 2012. Before founding Nextech Venture Ltd., Dr. Scheidegger was a managing director and member of the board of the Swiss Federal Institute of Technology (ETH) Zurich, Switzerland from 1995 to 1998. Prior to that, he served as the first managing director of the Swiss National Supercomputing Centre (CSCS) from 1992 to 1995, and managed an international drug-discovery project at Ciba-Geigy AG (today Novartis AG), Japan from 1988 to 1991. He is a former member or observer of the boards of directors of Agensys, Inc., Ganymed Pharmaceuticals AG, The Genetics Company, Inc., MacroGenics, Inc., TetraLogic Pharmaceuticals Corp., Webwasher AG and Xelector Ltd. Dr. Scheidegger received a Ph.D. in microbiology from the University of Basel, Switzerland, and has completed a post-doctorate research fellowship in enzymology at the University of Kyoto, Japan, and an executive training program at Harvard Business School.

Our board of directors believes that Dr. Scheidegger's expertise and experience in the life sciences industry and his educational background provide him with the qualifications and skills to serve on our board of directors. Dr. Scheidegger will resign from our board of directors contingent upon and effective immediately prior to the effectiveness of the registration statement of which this prospectus is a part.

J. Rainer Twiford, J.D., Ph.D. Dr. Twiford has served as a member of our board of directors since September 2008. Dr. Twiford has been President of Brookline Investments, Inc. (formerly Capital Strategies Advisors, Inc.), an investment advisory company he founded in 1994, since 1999. Dr. Twiford has been a member of the board of directors of Integrated Photonics, Inc., an optical device company, since November 1999. Prior to founding Brookline Partners, Dr. Twiford was a partner of Trammell Crow Company, a real estate development and investment company, from 1987 to 1991. From June 2007 to July 2013, Dr. Twiford was a member of the board of directors of Care Investment Trust Inc. (now Tiptree Financial Inc.), a real estate investment company. He also served as the Chairman of the Compensation, Nominating and Governance Committee of Care Investment Trust Inc. from September 2011 to July 2013. In addition, Dr. Twiford previously served on the board of a children's behavioral health company. Dr. Twiford received a B.A. and a Ph.D. from the University of Mississippi, an M.A. from the University of Akron and a J.D. from the University of Virginia.

Our board of directors believes that Dr. Twiford's extensive experience in finance, his experience as a public company director and his educational background provide him with the qualifications and skills to serve on our board of directors.

Paul Walker. Mr. Walker has served on our board of directors since September 2014. Mr. Walker has been a partner of New Enterprise Associates, an investment firm focused on venture capital and growth equity investments, since April 2008. From January 2001 to March 2008, Mr. Walker worked at MPM Capital, a life sciences venture capital firm, as a general partner with the MPM BioEquities Fund. From July 1996 to December 2000, Mr. Walker served as a portfolio manager at Franklin Resources, Inc., a global investment management organization known as Franklin Templeton Investments. Mr. Walker was a member of the board of directors of TESARO, Inc., an oncology-focused biopharmaceutical company, from May 2010 to May 2014. Mr. Walker received a B.S. in biochemistry and cell biology from the University of California at San Diego and is a Chartered Financial Analyst.

Our board of directors believes that Mr. Walker's experience in the life sciences and venture capital industries, his educational background and his experience as a public company director provide him with the qualifications and skills to serve on our board of directors.

Scientific Advisory Board

We have established a scientific advisory board. We regularly seek advice and input from these experienced scientific leaders on matters related to our research and development programs. The members of our scientific advisory board consist of experts across a range of key disciplines relevant to our programs and science. We intend to continue to leverage the broad expertise of our advisors by seeking their counsel on important topics relating to our research and development programs. The members of our scientific advisory board have entered into consulting agreements with us covering their respective confidentiality, non-disclosure and proprietary rights matters, and one member owns shares of our common stock. All of the scientific advisors are employed by or have consulting arrangements with other entities and devote only a small portion of their time to us.

Our current advisors are:

Name	Title
Charles L. Sawyers, M.D.	Chair, Human Biology and Pathogenesis Program, Memorial Sloan Kettering Cancer Center, New York, New York
William G. Kaelin, Jr., M.D.	Professor of Medicine, Dana Farber Cancer Institute and Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts
Stanton L. Gerson, M.D.	Director of the Case Comprehensive Cancer Center, Cleveland, Ohio

Board Composition

Our business and affairs are organized under the direction of our board of directors, which currently consists of eight members. The primary responsibilities of our board of directors are to provide oversight, strategic guidance, counseling and direction to our management. Our board of directors meets on a regular basis and additionally as required.

Six of our eight current directors were elected to serve on our board of directors pursuant to an amended and restated voting agreement, dated September 19, 2014, by and among us and certain of our stockholders. Pursuant to the voting agreement, Dr. Harada, Mr. Hozoji,

Mr. LaRue, Dr. Scheidegger and Mr. Walker were selected to serve on our board of directors as representatives of our preferred stockholders, as designated by JAFCO Super V3 Investment Limited Partnership with respect to Dr. Harada and Mr. Hozoji; by the holders of a majority of our outstanding preferred stock with respect to Mr. LaRue; by ONC Partners, L.P. or Nextech III Oncology, LPCI with respect to Dr. Scheidegger and by New Enterprise Associates 14, L.P. with respect to Mr. Walker. Dr. Theuer was selected to serve on our board of directors as the director then serving as our chief executive officer. The amended and restated voting agreement will terminate in connection with the closing of this offering, and members previously elected to our board of directors pursuant to the amended and restated voting agreement (other than Dr. Scheidegger, who will resign from our board of directors contingent upon and effective immediately prior to the effectiveness of the registration statement of which this prospectus is a part) will continue to serve as a director until his successor is duly elected and qualified.

Our board of directors has determined that all of our directors, except Dr. Theuer, are independent directors, as defined by Rule 5605(a)(2) of the NASDAQ Listing Rules.

In accordance with the terms of our amended and restated certificate of incorporation and bylaws, which will be effective immediately prior to the closing of this offering, our board of directors will be divided into three classes, class I, class II and class III, with members of each class serving staggered three-year terms.

Effective immediately prior to the closing of this offering, our board of directors will be comprised of the following classes:

- Class I, which will consist of Dr. Harada and Mr. Hozoji, whose terms will expire at our annual meeting of stockholders to be held in 2016;
- Class II, which will consist of Dr. Mattingly and Dr. Twiford, and whose terms will expire at our annual meeting of stockholders to be held in 2017; and
- Class III, which will consist of Mr. LaRue, Dr. Theuer and Mr. Walker, and whose terms will expire at our annual meeting of stockholders to be held in 2018.

At each annual meeting of stockholders to be held after the initial classification, the successors to directors whose terms then expire will serve until the third annual meeting following their election and until their successors are duly elected and qualified. The authorized size of our board of directors is currently eight members. The authorized number of directors may be changed only by resolution by a majority of the board of directors. This classification of the board of directors may have the effect of delaying or preventing changes in our control or management. Our directors may be removed for cause by the affirmative vote of the holders of at least $66^{2}/_{3}$% of our voting stock.

Role of the Board in Risk Oversight

One of the key functions of our board of directors is informed oversight of our risk management process. Our board of directors does not have a standing risk management committee, but rather administers this oversight function directly through the board of directors as a whole, as well as through various standing committees of our board of directors that address risks inherent in their respective areas of oversight. In particular, our board of directors is responsible for monitoring and assessing strategic risk exposure and our audit committee has the responsibility to consider and discuss our major financial risk exposures and the steps our management has taken to monitor and control these exposures, including guidelines and policies to govern the process by which risk assessment and management is undertaken. The audit committee also monitors compliance with legal and regulatory requirements. Our nominating and corporate governance committee monitors the effectiveness of our corporate governance practices, including whether they are successful in preventing illegal or improper liability-creating conduct. Our compensation committee assesses and monitors whether any of our compensation policies and programs has the potential to encourage excessive risk-taking.

Board Committees

Our board of directors has established an audit committee, a compensation committee and a nominating and corporate governance committee.

Audit Committee

Our audit committee consists of Mr. LaRue, Dr. Harada and Mr. Walker. Our board of directors has determined that each of the members of this committee satisfies the NASDAQ Stock Market independence requirements. Each member of our audit committee can read and understand fundamental financial statements in accordance with NASDAQ audit committee requirements. In arriving at this determination, the board has examined each audit committee member's scope of experience and the nature of their prior and/or current employment.

Mr. LaRue serves as the chair of our audit committee. Our board of directors has determined that Mr. LaRue qualifies as an audit committee financial expert within the meaning of SEC regulations and meets the financial sophistication requirements of the NASDAQ Listing Rules. In making this determination, our board has considered Mr. LaRue formal education and previous and current experience in financial roles. Both our independent registered public accounting firm and management periodically meet privately with our audit committee.

The functions of this committee include, among other things:

- evaluating the performance, independence and qualifications of our independent auditors and determining whether to retain our existing independent auditors or engage new independent auditors;
- reviewing and approving the engagement of our independent auditors to perform audit services and any permissible non-audit services;
- monitoring the rotation of partners of our independent auditors on our engagement team as required by law;
- prior to engagement of any independent auditor, and at least annually thereafter, reviewing relationships that may reasonably be thought to bear on their independence, and assessing and otherwise taking the appropriate action to oversee the independence of our independent auditor;
- reviewing our annual and quarterly financial statements and reports, including the disclosures contained under the caption "Management's Discussion and Analysis of

Financial Condition and Results of Operations," and discussing the statements and reports with our independent auditors and management;

- reviewing with our independent auditors and management significant issues that arise regarding accounting principles and financial statement presentation and matters concerning the scope, adequacy and effectiveness of our financial controls;
- reviewing with management and our auditors any earnings announcements and other public announcements regarding material developments;
- establishing procedures for the receipt, retention and treatment of complaints received by us regarding financial controls, accounting or auditing matters and other matters;
- preparing the report that the SEC requires in our annual proxy statement;
- reviewing and providing oversight of any related-person transactions in accordance with our related person transaction policy and reviewing and monitoring compliance with legal and regulatory responsibilities, including our code of business conduct and ethics;
- reviewing our major financial risk exposures, including the guidelines and policies to govern the process by which risk assessment and risk management is implemented;
- reviewing on a periodic basis our investment policy; and
- reviewing and evaluating on an annual basis the performance of the audit committee and the audit committee charter.

We believe that the composition and functioning of our audit committee complies with all applicable requirements of the Sarbanes-Oxley Act of 2002, as amended, or the Sarbanes-Oxley Act, and all applicable SEC and NASDAQ rules and regulations. We intend to comply with future requirements to the extent they become applicable to us.

Compensation Committee

Our compensation committee consists of Dr. Twiford, Mr. Hozoji and Mr. LaRue. Dr. Twiford serves as the chair of our compensation committee. Our board of directors has determined that each of the members of our compensation committee is a non-employee director, as defined in Rule 16b-3 promulgated under the Securities Exchange Act of 1934, or the Exchange Act, is an outside director, as defined pursuant to Section 162(m) of the Internal Revenue Code of 1986, as amended, and satisfies the NASDAQ Stock Market independence requirements. The functions of this committee include, among other things:

- reviewing, modifying and approving (or if it deems appropriate, making recommendations to the full board of directors regarding) our overall compensation strategy and policies;
- making recommendations to the full board of directors regarding the compensation and other terms of employment of our executive officers;
- reviewing and making recommendations to the full board of directors regarding performance goals and objectives relevant to the compensation of our executive officers and assessing their performance against these goals and objectives;
- reviewing and approving (or if it deems it appropriate, making recommendations to the full board of directors regarding) the equity incentive plans, compensation plans and similar programs advisable for us, as well as modifying, amending or terminating existing plans and programs;

- evaluating risks associated with our compensation policies and practices and assessing whether risks arising from our compensation policies and practices for our employees are reasonably likely to have a material adverse effect on us;
- reviewing and making recommendations to the full board of directors regarding the type and amount of compensation to be paid or awarded to our non-employee board members;
- establishing policies with respect to votes by our stockholders to approve executive compensation to the extent required by Section 14A of the Exchange Act and, if applicable, determining our recommendations regarding the frequency of advisory votes on executive compensation;
- reviewing and assessing the independence of compensation consultants, legal counsel and other advisors as required by Section 10C of the Exchange Act;
- administering our equity incentive plans;
- establishing policies with respect to equity compensation arrangements;
- reviewing the competitiveness of our executive compensation programs and evaluating the effectiveness of our compensation policy and strategy in achieving expected benefits to us;
- reviewing and making recommendations to the full board of directors regarding the terms of any employment agreements, severance arrangements, change in control protections and any other compensatory arrangements for our executive officers;
- reviewing with management and approving our disclosures under the caption "Compensation Discussion and Analysis" in our periodic reports or proxy statements to be filed with the SEC, to the extent such caption is included in any such report or proxy statement;
- preparing the report that the SEC requires in our annual proxy statement; and
- reviewing and evaluating on an annual basis the performance of the compensation committee and the compensation committee charter.

We believe that the composition and functioning of our compensation committee complies with all applicable requirements of the Sarbanes-Oxley Act, and all applicable SEC and NASDAQ rules and regulations. We intend to comply with future requirements to the extent they become applicable to us.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee consists of Mr. Walker, Mr. Hozoji, and Dr. Mattingly. Our board of directors has determined that each of the members of this committee satisfies the NASDAQ Stock Market independence requirements. Mr. Walker serves as the chair of our nominating and corporate governance committee. The functions of this committee include, among other things:

- identifying, reviewing and evaluating candidates to serve on our board of directors;
- determining the minimum qualifications for service on our board of directors;
- evaluating director performance on the board and applicable committees of the board and determining whether continued service on our board is appropriate;
- evaluating, nominating and recommending individuals for membership on our board of directors;

- evaluating nominations by stockholders of candidates for election to our board of directors;
- considering and assessing the independence of members of our board of directors;
- developing a set of corporate governance policies and principles and recommending to our board of directors any changes to such policies and principles;
- considering questions of possible conflicts of interest of directors as such questions arise; and
- reviewing and evaluating on an annual basis the performance of the nominating and corporate governance committee and the nominating and corporate governance committee charter.

We believe that the composition and functioning of our nominating and corporate governance committee complies with all applicable requirements of the Sarbanes-Oxley Act, and all applicable SEC and NASDAQ rules and regulations. We intend to comply with future requirements to the extent they become applicable to us.

Compensation Committee Interlocks and Insider Participation

We have established a compensation committee which has and will make decisions relating to compensation of our executive officers. Our board of directors has appointed Dr. Twiford, Mr. Hozoji, and Mr. LaRue to serve on the compensation committee. None of these individuals has ever been an executive officer or employee of ours. None of our executive officers currently serves, or has served during the last completed fiscal year, on the compensation committee or board of directors of any other entity that has one or more executive officers serving as a member of our board of directors or compensation committee.

Limitation on Liability and Indemnification of Directors and Officers

Our amended and restated certificate of incorporation, which will be effective immediately prior to the closing of this offering, limit our directors' liability to the fullest extent permitted under Delaware corporate law. Delaware corporate law provides that directors of a corporation will not be personally liable for monetary damages for breach of their fiduciary duties as directors, except for liability:

- for any transaction from which the director derives an improper personal benefit;
- for any act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- under Section 174 of the Delaware General Corporation Law (unlawful payment of dividends or redemption of shares); or
- for any breach of a director's duty of loyalty to the corporation or its stockholders.

If the Delaware General Corporation Law is amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of our directors shall be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law, as so amended.

Delaware law and our amended and restated bylaws provide that we will, in certain situations, indemnify our directors and officers and may indemnify other employees and other agents, to the fullest extent permitted by law. Any indemnified person is also entitled, subject to certain limitations, to payment or reimbursement of reasonable expenses (including attorneys' fees and disbursements) in advance of the final disposition of the proceeding.

In addition, we have entered, and intend to continue to enter, into separate indemnification agreements with our directors and officers. These agreements, among other things, require us to indemnify our directors and officers for certain expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or officer in any action or proceeding arising out of their services as one of our directors or officers or any other company or enterprise to which the person provides services at our request.

We maintain a directors' and officers' insurance policy pursuant to which our directors and officers are insured against liability for actions taken in their capacities as directors and officers. We believe that these provisions in our amended and restated certificate of incorporation and amended bylaws and these indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or control persons, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

EXECUTIVE AND DIRECTOR COMPENSATION

Our named executive officers for the year ended December 31, 2014, which consist of our principal executive officer and our only other executive officers as of December 31, 2014, are:

- Charles P. Theuer, Ph.D., our President and Chief Executive Officer; and
- H Casey Logan, M.B.A., our Chief Business Officer.
- Patricia Bitar, CPA, our Chief Financial Officer.

Summary Compensation Table

Name and principal position	Year	Salary ($)	Option awards ($)[1]	Non-equity incentive plan compensation ($)[2]	All other compensation ($)[3]	Total ($)
Charles P. Theuer, M.D., Ph.D.	2014	395,000	636,596	—	10,400	1,041,996
President and Chief Executive Officer	2013	310,000	96,763	74,400	11,250	492,413
H Casey Logan, M.B.A.[4]	2014	251,540	82,006	—	9,422	342,968
Chief Business Officer	2013	206,500	116,678	32,776	7,867	363,821
Patricia Bitar, CPA[5]	2014	69,231	280,937	—	2,500	352,668
Chief Financial Officer						

(1) In accordance with SEC rules, this column reflects the aggregate grant date fair value of the option awards granted during 2013 computed in accordance with FASB ASC Topic 718 for stock-based compensation transactions (ASC 718). Assumptions used in the calculation of these amounts are included in Note 6 to our 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 the stock options.

(2) Amounts shown represent annual performance-based bonuses earned for the respective fiscal year. As of the date of this prospectus, the amount of the bonuses earned for 2014 has not yet been determined. We expect to determine and pay such bonuses on or before March 31, 2015. For more information, see below under "—Annual Performance-Based Bonus Opportunity."

(3) Amounts shown represent 401(k) plan matching contributions and $1,050 for reimbursement of legal expenses for Dr. Theuer in 2013 in connection with negotiating his employment agreement.

(4) Mr. Logan was hired in February 2013.

(5) Ms. Bitar was hired in September 2014.

Annual Base Salary

The compensation of our named executive officers is generally determined and approved by our board of directors, based on the recommendation of the compensation committee of our board of directors. The table below shows the annual base salaries for our named executive officers in 2014:

Name	2014 Base Salary ($)
Charles P. Theuer, M.D., Ph.D.	395,000
H Casey Logan, M.B.A.	260,000
Patricia Bitar, CPA	250,000

Annual Performance-Based Bonus Opportunity

In addition to base salaries, our named executive officers are eligible to receive annual performance-based cash bonuses, which are designed to provide appropriate incentives to our executives to achieve defined annual corporate goals and to reward our executives for individual achievement towards these goals. The annual performance-based bonus each named executive officer is eligible to receive is generally based on the extent to which we achieve the corporate goals that our board of directors establishes each year. At the end of the year, our board of directors reviews our performance against each corporate goal and determines the extent to which we achieved each of our corporate goals.

For 2014, Dr. Theuer was eligible to receive a target bonus of up to 50% of his base salary, Mr. Logan was eligible to receive a target bonus of up to 30% of his base salary and Ms. Bitar was eligible to receive a target bonus of up to 30% of her base salary, each pursuant to the terms of his employment agreement described below under "—Agreements with our Named Executive Officers." Our board of directors will generally consider each named executive officer's individual contributions towards reaching our annual corporate goals but does not typically establish specific individual goals for our named executive officers. There is no minimum bonus percentage or amount established for the named executive officers and, as a result, the bonus amounts vary from year to year based on corporate and individual performance. In April 2014, our board of directors approved our corporate goals for 2014, with financial goals assigned a 50% weight, project-based goals assigned a 45% weight and team-based goals assigned a 5% weight.

Equity-Based Incentive Awards

Our equity-based incentive awards are designed to align our interests with those of our employees and consultants, including our named executive officers. Our board of directors is responsible for approving equity grants. In the fiscal year ending December 31, 2014, stock option awards were the only form of equity awards we granted to our named executive officers. Vesting of the stock option awards is tied to continuous service with us and serves as an additional retention measure. Our executives generally are awarded an initial new hire grant upon commencement of employment. Additional grants may occur periodically in order to specifically incentivize executives with respect to achieving certain corporate goals or to reward executives for exceptional performance.

Prior to this offering, we have granted all equity awards pursuant to the 2011 plan, the terms of which are described below under "—Equity Benefit Plans." All options are granted with a per share exercise price equal to no less than the fair market value of a share of our common stock on the date of the grant of such award. Generally our stock option awards vest over a four-year period subject to the holder's continuous service to us and may be granted with an early exercise feature. Options granted to certain of our employees (including Dr. Theuer and Mr. Logan) in October 2014 in connection with our Series B financing also include an additional vesting condition that this offering be completed on or before March 31, 2015. If this offering is not completed by such deadline, the option shares subject to the milestone vesting condition will be forfeited.

With the exception of stock option awards granted to Dr. Theuer, described below under "—Potential Payments Upon Termination or Change in Control," all of our outstanding stock option awards as of September 30, 2014 contain a double trigger acceleration feature. Pursuant to such double trigger acceleration feature, in the event of the holder's cessation of continuous service without cause, and not due to a death or disability, in connection with or within 18 months following consummation of a change in control, the vesting and exercisability of the option will be accelerated in full.

In March 2013, our board of directors granted Dr. Theuer and Mr. Logan options to purchase 25,839 and 85,270 shares of common stock, respectively, each with an exercise price of $1.34 per share. On May 23, 2013, our board of directors granted Dr. Theuer and Mr. Logan options to purchase 68,019 and 27,207 shares of common stock, respectively, each with an exercise price of $1.34 per share. The vesting terms of each such option grant are described in the footnotes to the "—Outstanding Equity Awards at Fiscal Year-End" table below. In October 2014, our board of directors granted Dr. Theuer, Mr. Logan and Ms. Bitar options to purchase 133,953, 17,255 and 59,115 shares of our common stock respectively, each with an exercise price of $7.04 per share. Such option grants to Dr. Theuer and Mr. Logan contain the milestone vesting condition described above, but Ms. Bitar's grant is only subject to our standard four-year vesting schedule because it is a new hire grant.

Agreements with Our Named Executive Officers

Below are descriptions of our employment agreements with our named executive officers. For a discussion of the severance pay and other benefits to be provided in connection with a termination of employment and/or a change in control under the arrangements with our named executive officers, please see "—Potential Payments upon Termination or Change in Control" below.

Agreement with Dr. Theuer. In May 2014, we entered into an amended and restated employment agreement with Dr. Theuer that governs the terms of his employment with us. This agreement was further amended in September 2014 in connection with our Series B financing to include an updated invention assignment agreement and clarify the language of certain provisions for compliance with California law. Pursuant to the agreement, Dr. Theuer is entitled to an annual base salary of $395,000 and is eligible to receive an annual performance bonus of up to 50% of his base salary, as determined by our board of directors. Pursuant to his existing employment agreement, within 90 days of any future issuance of common stock during the term of the agreement, we are obligated to grant Dr. Theuer a stock option to purchase a number of shares sufficient to maintain an ownership percentage of 5% of all of our outstanding stock on a fully diluted basis; this provision does not apply to and terminates in connection with the closing of this offering. Dr. Theuer was also entitled to reimbursement of his legal expenses incurred in connection with negotiating his amended agreement (up to $2,500). Dr. Theuer is additionally entitled to certain severance benefits pursuant to his agreement, the terms of which are described below under "—Potential Payments Upon Termination or Change of Control."

Agreement with Mr. Logan. We entered into an employment agreement with Mr. Logan in February 2013 that governs the current terms of his employment with us. This agreement was amended in September 2014 in connection with our Series B financing to include an updated invention assignment agreement. Pursuant to the agreement, Mr. Logan was entitled to an annual base salary of $236,000, was eligible to receive an annual target performance bonus of up to 20% of his base salary, as determined by our board of directors, and was granted initial new hire options to purchase an aggregate of 85,270 shares of our common stock. Mr. Logan is additionally entitled to certain severance benefits pursuant to his agreement, the terms of which are described below under "—Potential Payments Upon Termination or Change of Control."

Agreement with Ms. Bitar. We entered into a letter agreement with Ms. Bitar in September 2014 that governs the terms of her employment with us. Pursuant to the agreement, Ms. Bitar is entitled to an annual base salary of $250,000, is eligible to receive an annual target performance bonus of up to 30% of her base salary, as determined by our board of directors, and was granted an option to purchase an aggregate of 59,115 shares of our common stock. Ms. Bitar is additionally entitled to certain severance benefits pursuant to a severance agreement, the terms

of which are described below under "—Potential Payments Upon Termination or Change of Control."

Potential Payments Upon Termination or Change of Control

Regardless of the manner in which a named executive officer's service terminates, the named executive officer is entitled to receive amounts earned during his or her term of service, including salary and unused vacation pay. In addition, each of our named executive officers is eligible to receive certain benefits pursuant to his agreement with us described above under "—Agreements with our Named Executive Officers."

Dr. Theuer. If Dr. Theuer's employment is terminated as a result of his death, his estate would be entitled to receive payments equal to continued payment of his base salary for 12 months and reimbursement of expenses owed to him through the date of his death. In addition, his stock option awards would vest on an accelerated basis as if his termination occurred six months later. If Dr. Theuer's employment is terminated as a result of disability, he would be entitled to reimbursement of expenses owed to him through the date of his disability, and his stock option awards would vest on an accelerated basis as if his termination occurred six months later. If Dr. Theuer's employment is terminated for cause, he would be entitled to his base salary and any expense reimbursement owed to him as of the date of his termination. If Dr. Theuer's employment is terminated by us for reasons other than for cause or (including upon a change of control), he resigns for good reason or his agreement expires at the end of the term without renewal, he would be entitled to receive severance payments equal to continued payment of his base salary for 12 months, employee benefit coverage for up to 12 months, reimbursement of expenses owed to him through the date of his termination and 100% automatic vesting of any unvested time-based stock option awards.

Mr. Logan. If Mr. Logan's employment is terminated without cause or if he resigns for good reason, he will be entitled to a severance payment equal to six months of his annualized base salary and to payment of his health insurance premiums for up to six months. His options will become vested and exercisable with respect to an additional six months of vesting following the termination date. If Mr. Logan's employment is terminated without cause or if he resigns for good reason within 18 months following a change in control, he will be entitled to a severance payment equal to nine months of his annual base salary, payment of his health insurance premiums for up to nine months and 100% automatic vesting of any unvested time-based stock option awards.

Ms. Bitar. We entered into a severance agreement with Ms. Bitar in September 2014 under our severance plan. Pursuant to the agreement, if Ms. Bitar's employment is terminated without cause or if she resigns for good reason within 12 months following a change of control, she will be entitled to a severance payment equal to six months of her annual base salary and payment of her health insurance premium for six months.

Outstanding Equity Awards at Fiscal Year-End

The following table sets forth certain information regarding equity awards granted to our named executive officers that remain outstanding as of December 31, 2014.

			Option Awards[1][2]			
	Grant date	Vesting commencement date	Number of securities underlying unexercised options (#) exercisable	Number of securities underlying unexercised options (#) unexercisable	Option exercise price per share ($)[3]	Option expiration date
Charles P. Theuer, M.D., Ph.D.	9/20/2011	3/31/2011	175,627	11,709	0.70	9/19/2021
	3/14/2013	7/13/2012	15,611	10,228	1.34	3/13/2023
	5/23/2013	5/15/2013	26,924	41,095	1.34	5/22/2023
	10/3/2014	10/3/2014	—	82,575	7.04	10/2/2024
	10/3/2014	10/3/2014	—	51,378[4]	7.04	10/2/2024
H Casey Logan, M.B.A.	3/14/2013	2/19/2013	39,082	46,188	1.34	3/13/2023
	5/23/2013	2/19/2013	10,769	16,438[5]	1.34	5/22/2023
	10/3/2014	10/3/2014	—	1,200	7.04	10/2/2024
	10/3/2014	10/3/2014	—	16,055[4]	7.04	10/2/2024
Patricia Bitar, CPA	10/3/2014	9/22/2014	—	59,115	7.04	10/2/2024

(1) All of the option awards were granted under the 2011 plan, the terms of which are described below under "—Equity Benefit Plans."

(2) Except as specifically noted, all of the option awards have a four-year vesting schedule. Dr. Theuer's options granted prior to October 3, 2014 vest in equal monthly tranches over the four-year vesting period, and Mr. Logan's and Ms. Bitar's options, and Dr. Theuer's October 3, 2014 option awards, include a one-year cliff and monthly vesting thereafter. The options are also eligible for accelerated vesting on a qualifying termination as described above under "—Potential Payments Upon Termination or Change of Control."

(3) All of the option awards were granted with a per share exercise price equal to the fair market value of one share of our common stock on the date of grant, as determined in good faith by our board of directors.

(4) Option award includes an additional vesting condition that this offering be completed prior to March 31, 2015, and all shares subject to this option will be forfeited without consideration if this condition is not satisfied.

(5) 5,101 shares (9/48th of the total award) vested on the first anniversary of the vesting commencement date, and 1/48th of the shares under the award vest monthly thereafter for the next 39 months.

Option Exercises

Our named executive officers did not exercise any stock option awards during the fiscal year ended December 31, 2014.

Option Repricings

We did not engage in any repricings or other modifications or cancellations to any of our named executive officers' outstanding equity awards during the year ended December 31, 2014.

Health, Welfare and Retirement Benefits

All of our named executive officers are eligible to participate in our employee benefit plans, including our medical, dental, and life and disability insurance plans, in each case on the same basis as all of our other employees. We provide a 401(k) plan to our employees, including our named executive officers, as discussed in the section below entitled "—401(k) Plan."

401(k) Plan

We maintain a defined contribution employee retirement plan, or 401(k) plan, for our employees. Our named executive officers are also eligible to participate in the 401(k) plan on the same basis as our other employees. The 401(k) plan is intended to qualify as a tax-qualified plan under Section 401(k) of the Code, and is also intended to qualify as a safe harbor plan. During 2014, we made matching contributions of 100% of the amount of each participant's contributions, up to 4% of each participant's compensation. The 401(k) plan currently does not offer the ability to invest in our securities.

Nonqualified Deferred Compensation

None of our named executive officers participate in or have account balances in nonqualified defined contribution plans or other nonqualified deferred compensation plans maintained by us. Our board of directors may elect to provide our officers and other employees with nonqualified defined contribution or other nonqualified deferred compensation benefits in the future if it determines that doing so is in our best interests.

Equity Benefit Plans

2015 Equity Incentive Plan

Our board of directors adopted the 2015 plan in January 2015 and our stockholders approved the 2015 plan in January 2015, which will become effective upon the execution and delivery of the underwriting agreement related to this offering. Once the 2015 plan is effective, no further grants will be made under the 2011 plan.

Stock Awards. The 2015 plan provides for the grant of incentive stock options, or ISOs, nonstatutory stock options, or NSOs, stock appreciation rights, restricted stock awards, restricted stock unit awards, performance-based stock awards, and other forms of equity compensation, or collectively, stock awards, all of which may be granted to employees, including officers, non-employee directors and consultants of us and our affiliates. Additionally, the 2015 plan provides for the grant of performance cash awards. ISOs may be granted only to employees. All other awards may be granted to employees, including officers, and to non-employee directors and consultants.

Share Reserve. Initially, the aggregate number of shares of our common stock that may be issued pursuant to stock awards under the 2015 plan after the 2015 plan becomes effective is the sum of (1) 801,033 shares, plus (2) the number of shares (not to exceed 1,062,588 shares) (a) reserved for issuance under our 2011 plan at the time our 2015 plan becomes effective, and (b) any shares subject to outstanding stock options or other stock awards that were granted under our 2011 plan that are forfeited, terminate, expire or are otherwise not issued. 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. The maximum number of shares of our common stock that may be issued upon the exercise of ISOs under our 2015 plan is 3,617,571 shares.

No person may be granted stock awards covering more than 258,397 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 or strike price of at least 100% of the fair market value on the date the stock award is granted. Additionally, no person may be granted in a calendar year a performance stock award covering more than 258,397 shares of our common stock or a

performance cash award having a maximum value in excess of $1,000,000. Such limitations are designed to help assure that any deductions to which we would otherwise be entitled with respect to such awards will not be subject to the $1,000,000 limitation on the income tax deductibility of compensation paid to any covered executive officer imposed by Section 162(m) of the Code.

If a stock award granted under the 2015 plan expires or otherwise terminates without being exercised in full, or is settled in cash, the shares of our common stock not acquired pursuant to the stock award again will become available for subsequent issuance under the 2015 plan. In addition, the following types of shares of our common stock under the 2015 plan may become available for the grant of new stock awards under the 2015 plan: (1) shares that are forfeited to or repurchased by us prior to becoming fully vested; (2) shares withheld to satisfy income or employment withholding taxes; or (3) shares used to pay the exercise or purchase price of a stock award. Shares issued under the 2015 plan may be previously unissued shares or reacquired shares bought by us on the open market. As of the date hereof, no awards have been granted and no shares of our common stock have been issued under the 2015 plan.

Administration. Our board of directors, or a duly authorized committee thereof, has the authority to administer the 2015 plan. Our board of directors may also delegate to one or more of our officers the authority to (1) designate employees (other than other officers) to be recipients of certain stock awards, and (2) determine the number of shares of common stock to be subject to such stock awards. Subject to the terms of the 2015 plan, our board of directors or the authorized committee, referred to herein as the plan administrator, determines recipients, dates of grant, the numbers and types of stock awards to be granted and the terms and conditions of the stock awards, including the period of their exercisability and vesting schedule applicable to a stock award. Subject to the limitations set forth below, the plan administrator will also determine the exercise price, strike price or purchase price of awards granted and the types of consideration to be paid for the award.

The plan administrator has the authority to modify outstanding awards under our 2015 plan. Subject to the terms of our 2015 plan, the plan administrator has the authority to reduce the exercise, purchase or strike price of any outstanding stock award, 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 generally accepted accounting principles, with the consent of any adversely affected participant.

Stock Options. ISOs and NSOs are granted pursuant to stock option agreements adopted by the plan administrator. The plan administrator determines the exercise price for a stock option, within the terms and conditions of the 2015 plan, provided that the exercise price of a stock option generally cannot be less than 100% of the fair market value of our common stock on the date of grant. Options granted under the 2015 plan vest at the rate specified by the plan administrator.

The plan administrator determines the term of stock options granted under the 2015 plan, up to a maximum of ten years. Unless the terms of an optionholder's stock option agreement provide otherwise, if an optionholder's service relationship with us, or any of our affiliates, ceases for any reason other than disability, death or cause, the optionholder may generally exercise any vested options for a period of three months following the cessation of service. The option term may be extended in the event that exercise of the option following such a termination of service is prohibited by applicable securities laws or our insider trading policy. If an optionholder's service relationship with us or any of our affiliates ceases due to disability or death, or an optionholder dies within a certain period following cessation of service, the optionholder or a beneficiary may generally exercise any vested options for a period of 12 months in the event of disability and 18 months in the event of death. In the event of a termination for cause, options generally

terminate immediately upon the termination of the individual for cause. In no event may an option be exercised beyond the expiration of its term.

Acceptable consideration for the purchase of common stock issued upon the exercise of a stock option will be determined by the plan administrator and may include (1) cash, check, bank draft or money order, (2) a broker-assisted cashless exercise, (3) the tender of shares of our common stock previously owned by the optionholder, (4) a net exercise of the option if it is an NSO, and (5) other legal consideration approved by the plan administrator.

Unless the plan administrator provides otherwise, options generally are not transferable except by will, the laws of descent and distribution, or pursuant to a domestic relations order. An optionholder may designate a beneficiary, however, who may exercise the option following the optionholder's death.

Tax Limitations on Incentive Stock Options. The aggregate fair market value, determined at the time of grant, of our common stock with respect to ISOs that are exercisable for the first time by an optionholder during any calendar year under all of our stock plans may not exceed $100,000. Options or portions thereof that exceed such limit will generally be treated as NSOs. No ISO may be granted to any person who, at the time of the grant, owns or is deemed to own stock possessing more than 10% of our total combined voting power or that of any of our affiliates unless (1) the option exercise price is at least 110% of the fair market value of the stock subject to the option on the date of grant, and (2) the term of the ISO does not exceed five years from the date of grant.

Restricted Stock Awards. Restricted stock awards are granted pursuant to restricted stock award agreements adopted by the plan administrator. Restricted stock awards may be granted in consideration for (1) cash, check, bank draft or money order, (2) services rendered to us or our affiliates, or (3) any other form of legal consideration. Common stock acquired under a restricted stock award may, but need not, be subject to a share repurchase option in our favor in accordance with a vesting schedule to be determined by the plan administrator. A restricted stock award may be transferred only upon such terms and conditions as set by the plan administrator. Except as otherwise provided in the applicable award agreement, restricted stock awards that have not vested may be forfeited or repurchased by us upon the participant's cessation of continuous service for any reason.

Restricted Stock Unit Awards. Restricted stock unit awards are granted pursuant to restricted stock unit award agreements adopted by the plan administrator. Restricted stock unit awards may be granted in consideration for any form of legal consideration. A restricted stock unit award may be settled by cash, delivery of stock, a combination of cash and stock as deemed appropriate by the plan administrator, or in any other form of consideration set forth in the restricted stock unit award agreement. Additionally, dividend equivalents may be credited in respect of shares covered by a restricted stock unit award. Except as otherwise provided in the applicable award agreement, restricted stock units that have not vested will be forfeited upon the participant's cessation of continuous service for any reason.

Stock Appreciation Rights. Stock appreciation rights are granted pursuant to stock appreciation grant agreements adopted by the plan administrator. The plan administrator determines the strike price for a stock appreciation right, which generally cannot be less than 100% of the fair market value of our common stock on the date of grant. Upon the exercise of a stock appreciation right, we will pay the participant an amount equal to the product of (1) the excess of the per share fair market value of our common stock on the date of exercise over the strike price, multiplied by (2) the number of shares of common stock with respect to which the stock appreciation right is exercised. A stock appreciation right granted under the 2015 plan

vests at the rate specified in the stock appreciation right agreement as determined by the plan administrator.

The plan administrator determines the term of stock appreciation rights granted under the 2015 plan, up to a maximum of ten years. Unless the terms of a participant's stock appreciation right agreement provides otherwise, if a participant's service relationship with us or any of our affiliates ceases for any reason other than cause, disability or death, the participant may generally exercise any vested stock appreciation right for a period of three months following the cessation of service. The stock appreciation right term may be further extended in the event that exercise of the stock appreciation right following such a termination of service is prohibited by applicable securities laws. If a participant's service relationship with us, or any of our affiliates, ceases due to disability or death, or a participant dies within a certain period following cessation of service, the participant or a beneficiary may generally exercise any vested stock appreciation right for a period of 12 months in the event of disability and 18 months in the event of death. In the event of a termination for cause, stock appreciation rights generally terminate immediately upon the occurrence of the event giving rise to the termination of the individual for cause. In no event may a stock appreciation right be exercised beyond the expiration of its term.

Performance Awards. The 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 of compensation paid to a covered executive officer imposed by Section 162(m) of the Code. To help assure that the compensation attributable to performance-based awards will so qualify, our compensation committee can structure such awards so that stock or cash will be issued or paid pursuant to such award only after the achievement of certain pre-established performance goals during a designated performance period.

The performance goals that may be selected include one or more of the following: (1) earnings (including earnings per share and net earnings); (2) earnings before interest, taxes and depreciation; (3) earnings before interest, taxes, depreciation and amortization; (4) earnings before interest, taxes, depreciation, amortization and legal settlements; (5) earnings before interest, taxes, depreciation, amortization, legal settlements and other income (expense); (6) earnings before interest, taxes, depreciation, amortization, legal settlements, other income (expense) and stock-based compensation; (7) earnings before interest, taxes, depreciation, amortization, legal settlements, other income (expense), stock-based compensation and changes in deferred revenue; (8) total stockholder return; (9) return on equity or average stockholder's equity; (10) return on assets, investment, or capital employed; (11) stock price; (12) margin (including gross margin); (13) income (before or after taxes); (14) operating income; (15) operating income after taxes; (16) pre-tax profit; (17) operating cash flow; (18) sales or revenue targets; (19) increases in revenue or product revenue; (20) expenses and cost reduction goals; (21) improvement in or attainment of working capital levels; (22) economic value added (or an equivalent metric); (23) market share; (24) cash flow; (25) cash flow per share; (26) share price performance; (27) debt reduction; (28) implementation or completion of projects or processes (including, without limitation, clinical trial initiation, clinical trial enrollment, clinical trial results, new and supplemental indications for existing products, regulatory filing submissions, regulatory filing acceptances, regulatory or advisory committee interactions, regulatory approvals, and product supply); (29) stockholders' equity; (30) capital expenditures; (31) debt levels; (32) operating profit or net operating profit; (33) workforce diversity; (34) growth of net income or operating income; (35) billings; (36) bookings; (37) employee retention; (38) initiation of phases of clinical trials and/or studies by specific dates; (39) patient enrollment rates; (40) budget management; (41) submission to, or approval by, a regulatory body (including, but not limited to the FDA) of an applicable filing or a product candidate;

(42) regulatory milestones; (43) progress of internal research or clinical programs; (44) progress of partnered programs; (45) partner satisfaction; (46) timely completion of clinical trials; (47) submission of INDs and NDAs and other regulatory achievements; (48) research progress, including the development of programs; (49) strategic partnerships or transactions (including in-licensing and out-licensing of intellectual property; and (50) 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.

The 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 (1) in the award agreement at the time the award is granted or (2) in such other document setting forth the performance goals at the time the goals are established, we will appropriately make adjustments in the method of calculating the attainment of performance goals as follows: (a) to exclude restructuring and/or other nonrecurring charges; (b) to exclude exchange rate effects; (c) to exclude the effects of changes to generally accepted accounting principles; (d) to exclude the effects of any statutory adjustments to corporate tax rates; (e) to exclude the effects of any "extraordinary items" as determined under generally accepted accounting principles; (f) to exclude the dilutive effects of acquisitions or joint ventures; (g) to assume that any business divested by us achieved performance objectives at targeted levels during the balance of a performance period following such divestiture; (h) 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; (i) to exclude the effects of stock-based compensation and the award of bonuses under our bonus plans; (j) to exclude costs incurred in connection with potential acquisitions or divestitures that are required to be expensed under generally accepted accounting principles; (k) to exclude the goodwill and intangible asset impairment charges that are required to be recorded under generally accepted accounting principles; (l) to exclude the effect of any other unusual, non-recurring gain or loss or other extraordinary item; and (m) to exclude the effects of the timing of acceptance for review and/or approval of submissions to the FDA or any other regulatory body. In addition, we retain the discretion to reduce or eliminate the compensation or economic benefit due upon attainment of the performance goals and to define the manner of calculating the performance criteria we select to use for such performance period. The performance goals may differ from participant to participant and from award to award.

Other Stock Awards. The plan administrator may grant other awards based in whole or in part by reference to our common stock. The plan administrator will set the number of shares under the stock award and all other terms and conditions of such awards.

Changes to Capital Structure. In the event that there is a specified type of change in our capital structure, such as a stock split or recapitalization, appropriate adjustments will be made to (1) the class and maximum number of shares reserved for issuance under the 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 ISOs, (4) the class and maximum number of shares subject to stock awards that can be granted in a calendar year (as established under the 2015 plan pursuant to Section 162(m) of the Code) and (5) the class and number of shares and exercise price, strike price, or purchase price, if applicable, of all outstanding stock awards.

Corporate Transactions. In the event of certain specified significant corporate transactions, the plan administrator has the discretion to take any of the following actions with respect to stock awards:

- arrange for the assumption, continuation or substitution of a stock award by a surviving or acquiring entity or parent company;
- arrange for the assignment of any reacquisition or repurchase rights held by us to the surviving or acquiring entity or parent company;
- accelerate the vesting of the stock award and provide for its termination prior to the effective time of the corporate transaction;
- arrange for the lapse of any reacquisition or repurchase right held by us;
- cancel or arrange for the cancellation of the stock award in exchange for such cash consideration, if any, as our board of directors may deem appropriate; or
- make a payment equal to the excess of (1) the value of the property the participant would have received upon exercise of the stock award over (2) the exercise price otherwise payable in connection with the stock award.

Our plan administrator is not obligated to treat all stock awards, even those that are of the same type, in the same manner.

Under the 2015 plan, a corporate transaction is generally the consummation of (1) a sale or other disposition of all or substantially all of our consolidated assets, (2) a sale or other disposition of at least 90% of our outstanding securities, (3) a merger, consolidation or similar transaction following which we are not the surviving corporation, or (4) a merger, consolidation or similar transaction following which we are the surviving corporation but the shares of our common stock outstanding immediately prior to such transaction are converted or exchanged into other property by virtue of the transaction.

Change of Control. The plan administrator may provide, in an individual award agreement or in any other written agreement between a participant and us that the stock award will be subject to additional acceleration of vesting and exercisability in the event of a change of control. For example, certain of our employees may receive an award agreement that provides for vesting acceleration upon the individual's termination without cause or resignation for good reason (including a material reduction in the individual's base salary, duties, responsibilities or authority, or a material relocation of the individual's principal place of employment with us) in connection with a change of control. Under the 2015 plan, a change of control is generally (1) the acquisition by a person or entity of more than 50% of our combined voting power other than by merger, consolidation or similar transaction; (2) a consummated merger, consolidation or similar transaction immediately after which our stockholders cease to own more than 50% of the combined voting power of the surviving entity; or (3) a consummated sale, lease or exclusive license or other disposition of all or substantially of our consolidated assets.

Amendment and 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.

2011 Equity Incentive Plan

Our board of directors initially adopted, and our stockholders approved the 2011 Equity Incentive Plan, or the 2011 plan, in August 2011. The 2011 plan provides for the grant of stock options (ISOs and NSOs), stock appreciation rights, restricted stock awards and RSU awards to

our employees, directors, and consultants. To date, only stock options have been awarded under the 2011 plan.

Administration. Our board of directors, or a duly authorized committee thereof, has the authority to administer the 2011 plan. Subject to the terms of the 2011 plan, our board of directors determines recipients, dates of grant, the number of and types of awards to be granted and the terms and conditions of awards made, including any applicable vesting schedule. Awards under the 2011 plan are granted pursuant to award agreements adopted by the plan administrator.

Share Reserve. The aggregate number of shares of our common stock reserved for issuance pursuant to awards under the 2011 plan is 1,070,976 shares. The initial number of shares we reserved for issuance pursuant to the 2011 plan was 843,586 shares, which was increased in September 2014 to 1,070,976 shares in connection with our issuance of shares of our Series B redeemable convertible preferred stock. As of November 30, 2014, 8,388 shares of common stock were issued and outstanding pursuant to options under the plan that had been exercised, and 1,036,457 shares of common stock were subject to outstanding awards.

Corporate Transactions. In the event of certain specified significant corporate transactions, each outstanding award will be subject to the terms of the applicable transaction agreement. Such transaction agreement may provide, without limitation, for the assumption or substitution of awards, for their continuation, for accelerated vesting or for cancellation with or without consideration, in all cases without the consent of the award holder.

Amendment and Termination. Our board of directors has the authority to amend, suspend or terminate our 2011 plan, provided that such action does not materially impair the existing rights of any participant without such participant's written consent. Upon the effectiveness of the registration statement of which this prospectus is a part, no additional awards will be granted under the 2011 plan. However, any outstanding awards already granted under the 2011 plan will remain outstanding, subject to the terms of such plan and the applicable award agreements, until such outstanding awards are exercised or until they terminate or expire by their terms.

2015 Employee Stock Purchase Plan

Our board of directors adopted the ESPP in January 2015 and our stockholders approved the ESPP in January 2015. The ESPP will become effective immediately upon the execution and delivery of the underwriting agreement related to this offering. The purpose of the ESPP is to retain the services of new employees and secure the services of new and existing employees while providing incentives for such individuals to exert maximum efforts toward our success and that of our affiliates.

Share Reserve. Following this offering, the ESPP authorizes the issuance of 183,462 shares of our common stock pursuant to purchase rights granted to our employees or to employees of any of our designated affiliates. The number of shares of our common stock reserved for issuance will automatically increase on January 1 of each calendar year, from January 1, 2016 through January 1, 2025 by the least of (1) 1% of the total number of shares of our common stock outstanding on December 31 of the preceding calendar year, (2) 366,925 shares, or (3) a number determined by our board of directors that is less than (1) and (2). The ESPP is intended to qualify as an "employee stock purchase plan" within the meaning of Section 423 of the Code. As of the date hereof, no shares of our common stock have been purchased under the ESPP.

Administration. Our board of directors has delegated its authority to administer the ESPP to our compensation committee. The ESPP is implemented through a series of offerings of purchase rights to eligible employees. Under the ESPP, we may specify offerings with durations

of not more than 27 months, and may specify 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 employees participating in the offering. An offering may be terminated under certain circumstances.

Payroll Deductions. Generally, all regular employees, including executive officers, employed by us or by any of our designated affiliates, may participate in the ESPP and may contribute, normally through payroll deductions, up to 15% of their earnings for the purchase of our common stock under the ESPP. Unless otherwise determined by our board of directors, common stock will be purchased for accounts of employees participating in the ESPP at a price per share equal to the lower of (1) 85% of the fair market value of a share of our common stock on the first date of an offering or (2) 85% of the fair market value of a share of our common stock on the date of purchase.

Limitations. Employees may have to satisfy one or more of the following service requirements before participating in the ESPP, as determined by our board of directors: (1) customarily employed for more than 20 hours per week, (2) customarily employed for more than five months per calendar year or (3) continuous employment with us or one of our affiliates for a period of time (not to exceed two years). No employee may purchase shares under the ESPP at a rate in excess of $25,000 worth of our common stock based on the fair market value per share of our common stock at the beginning of an offering for each year such a purchase right is outstanding. Finally, no employee will be eligible for the grant of any purchase rights under the ESPP if immediately after such rights are granted, such employee has voting power over 5% or more of our outstanding capital stock measured by vote or value pursuant to Section 424(d) of the Code.

Changes to Capital Structure. In the event that 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 directors will make appropriate adjustments to (1) the number of shares reserved under the ESPP, (2) the maximum number of shares by which the share reserve may increase automatically each year and (3) the number of shares and purchase price of all outstanding purchase rights.

Corporate Transactions. In the event of certain significant corporate transactions, including the consummation of: (1) a sale of all our assets, (2) the sale or disposition of 90% of our outstanding securities, (3) a merger or consolidation where we do not survive the transaction and (4) a merger or consolidation where we do survive the transaction but the shares of our common stock outstanding immediately prior to such transaction are converted or exchanged into other property by virtue of the transaction, any then-outstanding rights to purchase our stock under the ESPP may be assumed, continued or substituted for by any surviving or acquiring entity (or its parent company). If the surviving or acquiring entity (or its parent company) elects not to assume, continue or substitute for such purchase rights, then the participants' accumulated payroll contributions will be used to purchase shares of our common stock within ten business days prior to such corporate transaction, and such purchase rights will terminate immediately.

Amendment and Termination. Our board of directors has the authority to amend or terminate our ESPP, provided that except in certain circumstances any such amendment or termination may not materially impair any outstanding purchase rights without the holder's consent. We will obtain stockholder approval of any amendment to our ESPP as required by applicable law or listing requirements.

Director Compensation

Our board of directors adopted a new compensation policy in December 2014 that will become effective upon the execution and delivery of the underwriting agreement related to this offering and will be applicable to all of our non-employee directors. This compensation policy provides that each non-employee director will receive the following compensation for service on our board of directors:

- an annual cash retainer of $35,000;
- an annual cash retainer of $60,000 for service as chairman of our board of directors;
- an additional annual cash retainer of $7,500, $5,000 and $3,750 for service on our audit committee, compensation committee and the nominating and corporate governance committee, respectively;
- an additional annual cash retainer of $15,000, $10,000 and $7,500 for service as chairman of the audit committee, compensation committee and the nominating and corporate governance committee (in lieu of regular committee member fees), respectively;
- an automatic annual option grant to purchase a number of shares of our common stock having a grant date fair value of $100,000 for each non-employee director serving on the board of directors on the date of our annual stockholder meeting (including by reason of his or her election at such meeting), in each case vesting 100% as of the earlier of the date of our next annual stockholder meeting and the one-year anniversary of the date of grant; and
- upon first joining our board of directors following this offering an automatic initial grant of an option to purchase a number of shares of our common stock having a grant date fair value of $168,000 that vests ratably in annual installments over a three-year period following the grant date.

Each of the option grants described above will vest and become exercisable subject to the director's continuous service with us, provided that each option will vest in full upon a change of control, as defined under our 2015 plan. The options will be granted under our 2015 plan, the terms of which are described in more detail above under "—Equity Benefit Plans—2015 Equity Incentive Plan."

Prior to this offering, we did not provide compensation to our non-employee directors other than Kenneth Galbraith, our former Chairman, who received stock option grants as his sole compensation.

We did not provide compensation to our non-employee directors during 2014.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following includes a summary of transactions since January 1, 2011 to which we have been a party, in which the amount involved in the transaction exceeded $120,000, and in which any of our directors, executive officers or, to our knowledge, beneficial owners of more than 5% of our capital stock or any member of the immediate family of any of the foregoing persons had or will have a direct or indirect material interest, other than equity and other compensation, termination, change of control and other arrangements, which are described under "Executive and Director Compensation."

Debt Conversion and Series A Preferred Stock Financing

From February 2006 to June 2010, we issued various promissory notes to entities affiliated with Lindsay A. Rosenwald, M.D., and in 2007 and 2008, we issued bridge notes to various investors. We refer to these promissory notes and bridge notes as the Old Debt. Subsequent to June 2010 and through March 2011, we borrowed additional amounts under the promissory notes issued to entities affiliated with Dr. Rosenwald, and in 2010, we issued additional bridge notes to other investors. We refer to these later borrowings and bridge notes as the New Debt. In March 2011, we entered into a Series A preferred stock purchase agreement, pursuant to which we issued and sold to investors in three closings an aggregate of 12,249,999 shares of our Series A redeemable convertible preferred stock, at a purchase price of $2.00 per share. At the time of the initial closing of the Series A preferred stock financing, the total principal and accrued interest under the Old Debt was approximately $42.3 million, and the total principal and accrued interest under the New Debt was approximately $2.5 million.

In connection with the initial closing of the Series A preferred stock financing, we and the holders of the Old Debt agreed to convert the principal and accrued interest under the Old Debt into an aggregate of 1,585,900 shares of our common stock, with each $1.00 of Old Debt converting into approximately 0.04 shares of our common stock. In addition, as partial consideration for the Series A redeemable convertible preferred stock purchased by the holders of the New Debt in the Series A preferred stock financing, the holders of the New Debt agreed to cancel the $2.5 million of outstanding New Debt, with the remaining consideration paid in cash.

The participants in this debt conversion and Series A preferred stock financing included holders of more than 5% of our capital stock and entities affiliated with our directors. The following table sets forth the aggregate number of shares of common stock and Series A

redeemable convertible preferred stock issued to these related parties in connection with the foregoing transactions:

Participants	Cancellation of Old Debt	Shares of Common Stock	Cancellation of New Debt and Cash Payments	Shares of Series A Redeemable Convertible Preferred Stock
Greater than 5% Stockholders				
Entities affiliated with Lindsay A. Rosenwald, M.D.(1)	$ 6,093,281	228,458(2)	$ 812,443(3)	406,221
Arcus Ventures Fund, LP	—	—	$ 2,000,000	1,000,000
BHP No. 2 Investment Limited Partnership	—	—	$ 2,000,000	1,000,000
Brookline Tracon Investment Fund, LLC(4)(5)	$ 15,470,692	580,051(6)	$ 3,220,300(7)	1,610,150
JAFCO Super V3 Investment Limited Partnership(5)	—	—	$ 10,000,000	5,000,000
Nextech III Oncology, LPCI(5)	—	—	$ 4,500,000	2,250,000
Entities Affiliated with Our Directors and Officers				
ONC Partners, L.P.(5)	—	—	$ 1,500,000	750,000

(1) Lindsay A. Rosenwald, M.D., as sole equity holder of Paramount BioSciences, LLC, or PBS, and Paramount BioCapital, Inc., and through The Lindsay A. Rosenwald 2000 Irrevocable Trust Dated 5/24/2000, The Lindsay A. Rosenwald Alaska Irrevocable Indenture of Trust Dated 8/28/2001, The Lindsay A. Rosenwald Nevada Irrevocable Trust Dated l/6/2003 and The Lindsay A. Rosenwald Rhode Island Irrevocable Indenture of Trust Dated 8/28/2001, collectively the Rosenwald Trusts, established for the benefit of his family, beneficially owned greater than 5% of our outstanding capital stock prior to our Series A preferred stock financing. In connection with our Series A preferred stock financing, Dr. Rosenwald and the Rosenwald Trusts agreed to relinquish all of their previously held shares of common stock, equal to 21,560 shares, in exchange for our seeking a waiver from the holders of our bridge notes of the provisions in the bridge notes that provided for the subordination of two future advance promissory notes issued in 2006 in favor of PBS, or the PBS Note, and The Lindsay A. Rosenwald 2000 Family Trusts Dated December 15, 2000, respectively, as part of the recapitalization of our capital stock.

(2) Of the shares of common stock acquired as a result of the recapitalization by entities affiliated with Dr. Rosenwald, 107,413 shares of common stock were acquired by PBS, and 121,044 shares of common stock were acquired by The Lindsay A. Rosenwald 2000 Family Trusts Dated December 15, 2000.

(3) In connection with the initial closing of the Series A preferred stock financing, PBS acquired 104,966 shares in exchange for the cancellation of debt in the amount of $812,443, which represents the principal and interest related to amounts loaned to us by PBS pursuant to the PBS Note between July 2010 and March 1, 2011.

(4) Brookline Tracon Investment Fund II, LLC, CSA Biotechnology Fund I, LLC, and CSA Biotechnology Fund II, LLC are affiliated with Brookline Tracon Investment Fund, LLC.

(5) As of the initial closing of the Series A preferred stock financing, each of these entities acquired at least one seat on our board. One of our directors (J. Rainer Twiford, J.D., Ph.D.) is affiliated with Brookline Tracon Investment Fund II, LLC; two of our directors (Kenji Harada, Ph.D., and Hironori Hozoji) are affiliated with JAFCO Super V3 Investment Limited Partnership; and one of our directors (Alfred Scheidegger, Ph.D.) is affiliated with Nextech III Oncology, LPCI and with ONC Partners, L.P.

(6) In connection with the recapitalization of our outstanding debt, Brookline Tracon Investment Fund, LLC, acquired 437,210 shares of our common stock, CSA Biotechnology Fund I, LLC, acquired 49,380 shares of our common stock and CSA Biotechnology Fund II, LLC acquired 93,460 shares of our common stock.

(7) Of the aggregate purchase price received from Brookline Tracon Investment Fund II, LLC, $1,220,300 represented a cancellation of debt.

Series B Preferred Stock Financing

In September 2014, we entered into a Series B preferred stock purchase agreement, pursuant to which we issued and sold to investors an aggregate of 12,400,274 shares of our Series B redeemable convertible preferred stock at a purchase price of approximately $2.19 per share, for aggregate consideration of $27.2 million.

The participants in this Series B preferred stock financing included holders of more than 5% of our capital stock and entities affiliated with our directors. The following table sets forth the aggregate number of shares of Series B redeemable convertible preferred stock issued to these related parties in this preferred stock financing:

Participants	Cash Payments	Shares of Series B Redeemable Convertible Preferred Stock
Greater than 5% Stockholders		
Arcus Ventures Fund, LP	$ 454,545.85	207,224
BHP No. 2 Investment Limited Partnership	$ 454,545.85	207,224
Brookline Tracon Investment Fund II, LLC(1)	$ 2,049,999.04	934,579
JAFCO Super V3 Investment Limited Partnership(1)	$ 2,272,729.22	1,036,120
Nextech III Oncology, LPCI(1)(2)	$ 1,022,728.15	466,254
Entities Affiliated with Our Directors and Officers		
New Enterprise Associates 14, L.P.(3)	$ 11,796,544.30	5,377,955
ONC Partners, L.P.(1)	$ 340,909.39	155,418

(1) One of our directors (J. Rainer Twiford, J.D., Ph.D.) is affiliated with Brookline Tracon Investment Fund II, LLC; two of our directors (Kenji Harada, Ph.D., and Hironori Hozoji) are affiliated with JAFCO Super V3 Investment Limited Partnership; and one of our directors (Alfred Scheidegger, Ph.D.) is affiliated with Nextech III Oncology, LPCI and ONC Partners, L.P.

(2) Excludes 155,418 shares of Series B redeemable convertible preferred stock issued to ONC Partners, L.P. Although ONC Partners, L.P. and Nextech III Oncology, LPCI have a common investment adviser, voting and investment decisions on behalf of ONC Partners, L.P. are made by an unrelated general partner.

(3) Includes 4,559 shares of Series B redeemable convertible preferred stock issued to NEA Ventures 2014, L.P. As of the initial closing of the Series B redeemable convertible preferred stock financing, New Enterprise Associates 14, L.P. acquired a seat on our board. Paul Walker, one of our directors, is a partner of New Enterprise Associates.

Brookline Group, LLC, an affiliate of Brookline Tracon Investment Fund II, LLC, a holder of more than five percent of our common stock, acted as a nonexclusive placement agent for the Series B preferred stock financing and received a fee in the amount of $95,727.22 in consideration for such services.

Concurrent Private Placement

NEA has indicated an interest in purchasing up to approximately $5.0 million of shares of our common stock at the initial public offering price (or 384,615 shares based on the assumed initial public offering price of $13.00 per share) in a proposed private placement that would close concurrently with this offering. This indication of interest is not a binding agreement or commitment to purchase, and we could determine to sell more, less or no shares to this stockholder and this stockholder could determine to purchase more, less or no shares in the proposed concurrent private placement. The shares that may be sold in the proposed concurrent private placement would not be registered under the Securities Act. We will pay the underwriters as placement agents in the proposed concurrent private placement an aggregate cash fee equal to 7.0% of the gross sales price of the shares of common stock sold in the concurrent private placement. The closing of this offering is not conditioned upon the closing of such concurrent private placement. As of November 30, 2014, NEA beneficially owned approximately 17.4% of our common stock and immediately following this offering and the concurrent private placement, based on the assumed amounts in this prospectus, NEA will beneficially own approximately 14.8% of our common stock. The sale of shares to NEA in the concurrent private placement will not be registered in this offering.

Employment Arrangements

We currently have written employment agreements with certain executive officers. For more information, refer to the section entitled "Executive and Director Compensation—Agreements with our Named Executive Officers."

Investor Agreements

In connection with our sale and issuance of Series B redeemable convertible preferred stock in September 2014, we entered into amended and restated investors' rights, voting and right of first refusal, co-sale and drag-along agreements containing voting rights, information rights, rights of first refusal and registration rights, among other things, with certain holders of our redeemable convertible preferred stock and certain holders of our common stock, including all of the holders of more than 5% of our capital stock or entities affiliated with them. These stockholder agreements will terminate upon the closing of this offering, except for the amended and restated investors' rights agreement, which contains certain covenants that will terminate in connection with the closing of this offering and contains certain registration rights that will continue after the consummation of this offering as more fully described below in "Description of Capital Stock—Registration Rights."

Stock Options Granted to Executive Officers and Directors

We have granted stock options to our executive officers and directors, as more fully described in "Executive and Director Compensation—Outstanding Equity Awards at Fiscal Year End."

Indemnification Agreements

We have entered, and intend to continue to enter, into separate indemnification agreements with our directors and executive officers, in addition to the indemnification provided for in our amended and restated bylaws. These agreements, among other things, require us to indemnify our directors and executive officers for certain expenses, including attorneys' fees, judgments, fines and settlement amounts incurred by a director or executive officer in any action or proceeding arising out of their services as one of our directors or executive officers or as a director or executive officer of any other company or enterprise to which the person provides services at our request. For more information regarding these indemnification arrangements, see "Management—Limitation on Liability and Indemnification of Directors and Officers." We believe that these bylaw provisions and indemnification agreements are necessary to attract and retain qualified persons as directors and officers.

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 decline in value to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

Potential Insider Participation

Certain of our existing stockholders and their affiliated entities, including stockholders affiliated with our directors, have indicated an interest in purchasing up to approximately $8.2 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 written related-person transactions policy that sets forth our policies and procedures regarding the identification, review, consideration and oversight of "related-person transactions." For purposes of our policy only, a "related-person transaction" is a transaction, arrangement or relationship (or any series of similar transactions, arrangements or relationships) in which we and any "related person" are participants, and involving an amount that exceeds $120,000.

Transactions involving compensation for services provided to us as an employee, consultant or director are not considered related-person transactions under this policy. A related person is any executive officer, director or a holder of more than five percent of our common stock, including any of their immediate family members and any entity owned or controlled by such persons.

Under the policy, where a transaction has been identified as a related-person transaction, management must present information regarding the proposed related-person transaction to our audit committee (or, where review by our audit committee would be inappropriate, to another independent body of our board of directors) for review. The presentation must include a description of, among other things, the material facts, the direct and indirect interests of the related persons, the benefits of the transaction to us and whether any alternative transactions are available. To identify related-person transactions in advance, we rely on information supplied by our executive officers, directors and certain significant stockholders. In considering related-person transactions, our audit committee or another independent body of our board of directors takes into account the relevant available facts and circumstances including, but not limited to:

- the risks, costs and benefits to us;
- the impact on a director's independence in the event the related person is a director, immediate family member of a director or an entity with which a director is affiliated;
- the terms of the transaction;
- the availability of other sources for comparable services or products; and
- the terms available to or from, as the case may be, unrelated third parties or to or from our employees generally.

In the event a director has an interest in the proposed transaction, the director must recuse himself or herself from the deliberations and approval.

PRINCIPAL STOCKHOLDERS

The following table sets forth 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 directors;
- each of our named executive officers; and
- all of our current executive officers and directors as a group.

The number of shares and percentage ownership information under the column entitled "Before offering" is based on 7,992,806 shares of common stock outstanding as of November 30, 2014, assuming conversion of all outstanding shares of our redeemable convertible preferred stock into 6,369,567 shares of common stock. The number of shares and percentage ownership information under the columns entitled "After offering" is based on 11,977,421 shares of common stock to be outstanding after the completion of this offering, assuming that NEA purchases 384,615 shares of our common stock in the proposed private placement that would close concurrently with this offering.

Information with respect to beneficial ownership has been furnished by each director, officer or beneficial owner of more than 5% of our common stock. We have determined beneficial ownership in accordance with the rules of the SEC. These rules generally attribute beneficial ownership of securities to persons who possess sole or shared voting power or investment power with respect to those securities. In addition, the rules include shares of our common stock issuable pursuant to the exercise of stock options or warrants that are either immediately exercisable or exercisable on or before January 29, 2015, which is 60 days after November 30, 2014. These shares are deemed to be outstanding and beneficially owned by the person holding those options or warrants for the purpose of computing the percentage ownership of that person, but they are not treated as outstanding for the purpose of computing the percentage ownership of any other person. Unless otherwise indicated, the persons or entities identified in this table have sole voting and investment power with respect to all shares shown as beneficially owned by them, subject to applicable community property laws.

Certain of our principal stockholders and their affiliated entities, including stockholders affiliated with our directors, have indicated an interest in purchasing up to approximately $8.2 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. The following table does not reflect any potential purchases by these stockholders, which purchases, if any, will increase the percentage of shares owned after the offering of such stockholders from that set forth in the table below.

Except as otherwise noted below, the address for each person or entity listed in the table is c/o TRACON Pharmaceuticals, Inc., 8910 University Center Lane, Suite 700, San Diego, California 92122.

Name and address of beneficial owner	Number of shares beneficially owned	Percentage of shares beneficially owned: Before offering and concurrent private placement	Percentage of shares beneficially owned: After offering and concurrent private placement
5% or greater stockholders:			
JAFCO Super V3 Investment Limited Partnership[1] Otemachi First Square, West Tower 11F 1-5-1 Otemachi, Chiyoda-ku Tokyo 100-0004, Japan	1,559,720	19.5%	13.0%
New Enterprise Associates 14, L.P.[2] 1954 Greenspring Drive, Suite 600 Timonium, MD 21093	1,774,267	17.4%	14.8%
Brookline Tracon Investment Fund LLC[3] c/o Brookline Investments Inc. 2501 Twentieth Place South, Suite 275 Birmingham, AL 35223	1,237,602	15.5%	10.3%
Nextech III Oncology, LPCI[4] Scheuchzerstrasse 35 8006 Zurich, Switzerland	701,874	8.8%	5.9%
BMV Direct II LP[5] 17190 Bernardo Center Drive San Diego, CA 92128	480,630	6.0%	4.0%
Directors and Named Executive Officers:			
Charles P. Theuer, M.D., Ph.D.[6]	221,779	2.7%	1.8%
Kenji Harada, Ph.D.[1]	—	*	*
Hironori Hozoji[1]	—	*	*
William R. LaRue[7]	8,388	*	*
Martin A. Mattingly, Pharm.D.[8]	—	*	*
Alfred Scheidegger, Ph.D.[4]	701,874	8.8%	5.9%
J. Rainer Twiford, J.D., Ph.D.[9]	1,247,631	15.6%	10.4%
Paul Walker[10]	—	*	*
H Casey Logan, M.B.A.[11]	49,851	*	*
Patricia Bitar, CPA	—	*	*
All executive officers and directors as a group (10 persons)[12]	2,229,523	27.0%	18.2%

* Represents beneficial ownership of less than 1%.

(1) Represents 1,559,720 shares of common stock beneficially owned by JAFCO Super V3 Investment Limited Partnership, or JAFCO. JAFCO Co., Ltd. is the general partner of JAFCO. As President, Chief Executive Officer and Chairperson of the investment committee of JAFCO Co., Ltd., Shinichi Fuki has voting and investment authority over the shares held by JAFCO. Kenji Harada, Ph.D., one of our directors, is Group Leader, Life Science Investment Group of JAFCO Co., Ltd., and Hironori Hozoji, another of our directors, is an Investment Officer of JAFCO Life Science Investment, a wholly owned subsidiary of JAFCO Co., Ltd. and a Principal of JAFCO, Ltd. Neither Dr. Harada nor Mr. Hozoji has beneficial ownership of such shares.

(2) Represents 1,388,474 shares of common stock beneficially owned by New Enterprise Associates 14, L.P., or NEA, and 1,178 shares of common stock beneficially owned by NEA Ventures 2014, Limited Partnership, or Ven 2014. Shares beneficially owned after the offering and the concurrent private placement includes 384,615 shares of our common stock (assuming the assumed initial public offering price of $13.00 per share) NEA has indicated an interest in purchasing in a proposed private placement that would close concurrently with this offering. The shares directly held by NEA are indirectly held by NEA Partners 14, L.P., the sole general partner of NEA; NEA 14 GP, LTD, the sole general partner of NEA Partners 14, L.P.; and each of the individual directors of NEA 14 GP, LTD. The directors of NEA 14 GP, LTD are M. James Barrett, Peter J. Barris, Forest Baskett, Ryan D. Drant, Anthony A. Florence, Jr., Patrick J. Kerins, Krishna "Kittu" Kolluri, David M. Mott, Scott D. Sandell, Peter Sonsini, Ravi Viswanathan and Harry R. Weller. NEA, NEA Partners 14, L.P., NEA 14 GP, LTD and the directors of

NEA 14 GP, LTD share voting and dispositive power with respect to the shares held by NEA. The shares directly held by Ven 2014 are indirectly held by Karen P. Welsh, the general partner of Ven 2014. Karen P. Welsh has voting and dispositive power with respect to the shares held by Ven 2014. Paul Walker, a partner at New Enterprise Associates, has no voting or dispositive power with regard to any of the above referenced shares and disclaims beneficial ownership of such shares except to the extent of his pecuniary interest therein, if any. All indirect holders of the above referenced shares disclaim beneficial ownership of all applicable shares except to the extent of their pecuniary interest therein.

(3) Represents 437,210 shares of common stock beneficially owned by Brookline Tracon Investment Fund, LLC, 657,552 shares of common stock beneficially owned by Brookline Tracon Investment Fund II, LLC, 49,380 shares of common stock beneficially owned by CSA Biotechnology Fund I, LLC and 93,460 shares of common stock beneficially owned by CSA Biotechnology Fund II, LLC. J. Rainer Twiford, J.D., Ph.D., one of our directors, has voting and dispositive control over these shares. Dr. Twiford disclaims beneficial ownership of these shares except to the extent of his pecuniary interest therein.

(4) Represents 701,874 shares of common stock beneficially owned by Nextech III Oncology, LPCI. The general partner of Nextech III is Nextech III GP Ltd. Alfred Scheidegger, Rudolf Gygax and Roland Ruckstuhl are the managing members of Nextech III GP Ltd. and may be deemed to share dispositive voting and investment power over the shares held by Nextech III. Each of these individuals disclaims beneficial ownership of such shares except to the extent of his pecuniary interest therein. Excludes 233,958 shares of common stock held by ONC Partners, L.P. Although ONC Partners, L.P. and Nextech III have a common investment adviser, voting and investment decisions on behalf of ONC Partners, L.P. are made by an unrelated general partner.

(5) Represents 480,630 shares of common stock beneficially owned by BMV Direct II LP. The sole general partner of BMV Direct II LP is BioMed Realty, L.P. The sole general partner of BioMed Realty, L.P. is BioMed Realty Trust, Inc., a publicly traded company.

(6) Includes 218,163 shares of common stock subject to options exercisable as of January 29, 2015.

(7) Consists of 8,388 shares of common stock subject to repurchase as of January 29, 2015.

(8) Martin A. Mattingly, Pharm.D., joined our board of directors on December 26, 2014.

(9) Consists of the shares of outstanding common stock referred to in footnote (3) and 10,029 shares held by MCT Investments, LLC. Dr. Twiford's spouse, Marsha C. Twiford, has voting and investment power with respect to the shares held by MCT Investments, LLC.

(10) Paul Walker is a partner of New Enterprise Associates.

(11) Consists of 49,851 shares of common stock subject to options exercisable as of January 29, 2015.

(12) Consists of the shares of outstanding common stock and shares of common stock subject to options exercisable as of January 29, 2015 referred to in footnotes (1), (4), (6), (7), (9) and (11).

DESCRIPTION OF CAPITAL STOCK

The following is a summary of the rights of our common and preferred stock and some of the provisions of our amended and restated certificate of incorporation and amended and restated bylaws, which will become effective upon the closing of this offering, and of the Delaware General Corporation Law. This summary is not complete. For more detailed information, please see our amended and restated certificate of incorporation and amended and restated bylaws, which are filed as exhibits to the registration statement of which this prospectus is a part, as well as the relevant provisions of the Delaware General Corporation Law.

General

Upon closing of this offering and the filing of our amended and restated certificate of incorporation, our authorized capital stock will consist of 200,000,000 shares of common stock, par value $0.001 per share, and 10,000,000 shares of preferred stock, par value $0.001 per share. All of our authorized preferred stock upon the closing of this offering will be undesignated.

Common Stock

Outstanding Shares

On November 30, 2014, there were 1,623,239 shares of common stock outstanding, held of record by 224 stockholders. Based on such number of shares of common stock outstanding as of November 30, 2014, and assuming (1) the conversion of all outstanding shares of our preferred stock as of November 30, 2014 into 6,369,567 shares of common stock in connection with the closing of this offering and (2) the issuance by us of 3,984,615 shares of common stock in this offering and the concurrent private placement, there will be 11,977,421 shares of common stock outstanding immediately following the closing of this offering.

As of November 30, 2014, there were 1,036,457 shares of common stock subject to outstanding options under our equity incentive plans.

Voting

Our common stock is entitled to one vote for each share held of record. Each holder of our common stock is entitled to notice of any stockholders' meeting, is entitled to vote upon such matters and in such manner as may be provided by law, including the election of directors, and does not have cumulative voting rights.

Dividends

Subject to preferences that may be applicable to any then outstanding preferred stock, the holders of common stock are entitled to receive dividends, if any, on a pro rata basis, as may be declared from time to time by our board of directors out of legally available funds.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities, subject to the satisfaction of any liquidation preference granted to the holders of any outstanding shares of preferred stock.

Rights and Preferences

Holders of our common stock have no preemptive, conversion or subscription rights, and there are no redemption or sinking fund provisions applicable to our common stock. The rights,

preferences and privileges of the holders of our common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of our preferred stock that we may designate and issue in the future.

Fully Paid and Nonassessable

All of our outstanding shares of common stock are, and the shares of common stock to be issued in this offering and the concurrent private placement will be, fully paid and nonassessable.

Preferred Stock

As of November 30, 2014, we had outstanding an aggregate of 24,650,273 shares of redeemable convertible preferred stock held of record by 26 stockholders.

In connection with the closing of this offering, all outstanding shares of redeemable convertible preferred stock at November 30, 2014 will convert into 6,369,567 shares of our common stock.

Immediately prior to the closing of this offering, our certificate of incorporation will be amended and restated to delete all references to such shares of preferred stock. Under the amended and restated certificate of incorporation, our board of directors will have the authority, without further action by the stockholders, to issue up to 10,000,000 shares of preferred stock in one or more series, to establish from time to time the number of shares to be included in each such series, to fix the rights, preferences and privileges of the shares of each wholly unissued series and any qualifications, limitations or restrictions thereon and to increase or decrease the number of shares of any such series, but not below the number of shares of such series then outstanding.

Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in our control that may otherwise benefit holders of our common stock and may adversely affect the market price of the common stock and the voting and other rights of the holders of common stock. We have no current plans to issue any shares of preferred stock.

Stock Options

As of November 30, 2014, 1,036,457 shares of common stock were issuable upon the exercise of outstanding stock options, at a weighted-average exercise price of $3.16 per share.

Outstanding Warrants

As of November 30, 2014, there were outstanding warrants to purchase 150,000 shares of our Series A redeemable convertible preferred stock issued to SVB, in connection with the execution of a loan and security agreement with SVB in November 2013 and the subsequent amendment of such agreement in June 2014. The warrants are exercisable for 10 years from the issuance date, with an exercise price of $2.00 per share. The warrants provide for cashless exercise at the option of the warrantholder, and also contain provisions for the adjustment of the exercise price and the number of shares issuable upon the exercise of the warrants in the event of stock dividends, stock splits, reclassifications, exchanges, combinations or substitutions. In connection with the closing of this offering, the warrants will automatically convert to warrants to purchase 38,758 shares of our common stock.

Registration Rights

Following the closing of this offering, certain holders of our common stock, or their transferees, will be entitled to the registration rights set forth below with respect to registration of the resale of such shares under the Securities Act pursuant to the amended and restated investors' rights agreement by and among us and certain of our stockholders.

Demand Registration Rights

At any time beginning on the earlier of (1) September 19, 2018 and (2) six months after the public offering date set forth on the cover page of this prospectus, upon the written request of a majority of the holders of the registrable securities then outstanding that we file a registration statement under the Securities Act covering the registration of registrable securities where the aggregate offering price is at least $5.0 million, we will be obligated to notify all holders of registrable securities of such request, within 20 days after receiving such request, and to use all commercially reasonable efforts to register the sale of all registrable securities that holders may request to be registered within 20 days after the mailing of such notice by the company. We are not required to file more than two registration statements which are declared or ordered effective. We are not required to file a registration statement during the period starting on the date 90 days prior to our good faith estimate of the date of filing of, and ending 180 days following the effective date of, the registration statement for our initial public offering. The underwriters of any underwritten offering will have the right to limit the number of shares having registration rights to be included in the registration statement.

"Piggyback" Registration Rights

If we register any securities for public sale for cash, holders of registration rights will have the right to include their shares in the registration statement. The underwriters of any underwritten offering will have the right to limit the number of shares having registration rights to be included in the registration statement, but not below 35% of the total number of shares included in the registration statement, except this offering, in which the holders have waived any and all rights to have their shares included.

Form S-3 Registration Rights

If we are eligible to file a registration statement on Form S-3, holders of not less than 20% of the registrable securities then outstanding have the right to demand that we file a registration statement on Form S-3 so long as the aggregate price to the public of the securities to be sold under the registration statement on Form S-3 is at least $1.0 million, subject to specified exceptions, conditions and limitations.

Expenses of Registration

Generally, we are required to bear all registration and selling expenses incurred in connection with the demand, piggyback and Form S-3 registrations described above, other than underwriting discounts and commissions.

Expiration of Registration Rights

The demand, piggyback and Form S-3 registration rights discussed above will terminate as to a given holder of registrable securities upon the earlier of (1) with respect to any holder, at such time after this offering as Rule 144 or another similar exemption under the Securities Act is available for the sale of all of such holder's shares during a three-month period without registration, or (2) upon termination of the amended and restated investors' rights agreement.

Anti-Takeover Effects of Provisions of Our Amended and Restated Certificate of Incorporation, Our Bylaws and Delaware Law

Delaware Anti-Takeover Law

We are subject to Section 203 of the Delaware General Corporation Law, or Section 203. Section 203 generally prohibits a public Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder, unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- the interested stockholder owned at least 85% of the voting stock of the corporation outstanding upon consummation of the transaction, excluding for purposes of determining the number of shares outstanding (1) shares owned by persons who are directors and also officers and (2) shares owned by 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 subsequent to the consummation of the transaction, the business combination is approved by the board and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least $66^{2}/_{3}\%$ of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines a business combination to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition involving the interested stockholder of 10% or more of the assets of the corporation;
- subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder;
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder; and
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws

Provisions of our amended and restated certificate of incorporation and amended and restated bylaws, which will become effective immediately prior to the closing of this offering, may delay or discourage transactions involving an actual or potential change in our control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares or transactions that our stockholders might otherwise deem to be in their best interests. Therefore, these provisions could adversely affect the price of our

common stock. Among other things, our amended and restated certificate of incorporation and amended and restated bylaws:

- permit our board of directors to issue up to 10,000,000 shares of preferred stock, with any rights, preferences and privileges as they may designate (including the right to approve an acquisition or other change in our control);
- provide that the authorized number of directors may be changed only by resolution adopted by a majority of the board of directors;
- provide that the board of directors or any individual director may only be removed with cause and the affirmative vote of the holders of at least $66^{2}/_{3}\%$ of the voting power of all of our then outstanding common stock;
- provide that all vacancies, including newly created directorships, may, except as otherwise required by law or subject to the rights of holders of preferred stock as designated from time to time, be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum;
- divide our board of directors into three classes;
- require that any action to be taken by our stockholders must be effected at a duly called annual or special meeting of stockholders and not be taken by written consent;
- provide that stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide notice in writing in a timely manner and also specify requirements as to the form and content of a stockholder's notice;
- do not provide for cumulative voting rights (therefore allowing the holders of a majority of the shares of common stock entitled to vote in any election of directors to elect all of the directors standing for election, if they should so choose);
- provide that special meetings of our stockholders may be called only by the chairman of the board, our Chief Executive Officer or by 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); and
- provide that the Court of Chancery of the State of Delaware will be the sole and exclusive forum for (1) any derivative action or proceeding brought on our behalf, (2) any action asserting a claim of breach of a fiduciary duty owed by any of our directors or officers to us or our stockholders, (3) any action asserting a claim against the us arising pursuant to any provision of the Delaware General Corporation Law or our certificate of incorporation or bylaws, or (4) any action asserting a claim against us governed by the internal affairs doctrine.

The amendment of any of these provisions, with the exception of the ability of our board of directors to issue shares of preferred stock and designate any rights, preferences and privileges thereto, would require the affirmative vote of the holders of at least $66^{2}/_{3}\%$ of the voting power of all of our then outstanding common stock.

NASDAQ Global Market Listing

We have applied for listing of our common stock on The NASDAQ Global Market under the symbol "TCON."

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company, LLC. The transfer agent and registrar's address is 6201 15th Avenue, Brooklyn, New York 11219.

SHARES ELIGIBLE FOR FUTURE SALE

Immediately prior to this offering, there has been no public market for our common stock. Future sales of substantial amounts of common stock in the public market could adversely affect prevailing market prices. Furthermore, since only a limited number of shares will be available for sale shortly after this offering because of contractual and legal restrictions on resale described below, sales of substantial amounts of common stock in the public market after the restrictions lapse could adversely affect the prevailing market price for our common stock as well as our ability to raise equity capital in the future.

Based on the number of shares of common stock outstanding as of September 30, 2014, upon the closing of this offering and the concurrent private placement, 11,977,421 shares of common stock will be outstanding, assuming (1) no exercise of the underwriters' over-allotment option, no exercise of options or warrants and (2) the sale of $5.0 million of shares of our common stock at a price per share equal to the initial public offering price (or 384,615 shares based on the assumed initial public offering price of $13.00 per share) in the concurrent private placement. All of the shares sold in this offering will be freely tradable unless held by an affiliate of ours or restricted as a result of the lock-up agreements described below. Except as set forth below, the remaining 7,992,806 shares of common stock outstanding after this offering and the concurrent private placement will be restricted as a result of securities laws or lock-up agreements. These remaining shares will generally become available for sale in the public market as follows:

- no restricted shares will be eligible for immediate sale upon the closing of this offering;
- up to 7,986,515 restricted shares will be eligible for sale under Rule 144 or Rule 701, subject to the volume limitations, manner of sale and notice provisions described below under "Rule 144," upon expiration of lock-up agreements at least 180 days after the date of this offering; and
- the remainder of the restricted shares will be eligible for sale from time to time thereafter upon expiration of their respective holding periods under Rule 144, but could be sold earlier if the holders exercise any available registration rights.

Rule 144

In general, under Rule 144 as currently in effect, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, any person who is not an affiliate of ours and has held their shares for at least six months, including the holding period of any prior owner other than one of our affiliates, may sell shares without restriction, provided current public information about us is available. In addition, under Rule 144, any person who is not an affiliate of ours and has held their shares for at least one year, including the holding period of any prior owner other than one of our affiliates, would be entitled to sell an unlimited number of shares immediately upon the closing of this offering without regard to whether current public information about us is available.

Beginning 90 days after the effective date of the registration statement of which this prospectus is a part, a person who is an affiliate of ours and who has beneficially owned restricted securities for at least six months, including the holding period of any prior owner other than one of our affiliates, is entitled to sell a number of restricted shares within any three-month period that does not exceed the greater of:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately 119,774 shares immediately after this offering and the concurrent private placement; 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.

Sales of restricted shares under Rule 144 held by our affiliates are also subject to requirements regarding the manner of sale, notice and the availability of current public information about us. Rule 144 also provides that affiliates relying on Rule 144 to sell shares of our common stock that are not restricted shares must nonetheless comply with the same restrictions applicable to restricted shares, other than the holding period requirement.

Notwithstanding the availability of Rule 144, the holders of substantially all of our restricted shares have entered into lock-up agreements as described below and their restricted shares will become eligible for sale at the expiration of the restrictions set forth in those agreements.

Rule 701

Under Rule 701, shares of our common stock acquired upon the exercise of currently outstanding options or pursuant to other rights granted under our stock plans may be resold by:

- persons other than affiliates, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, subject only to the manner-of-sale provisions of Rule 144; and

- our affiliates, beginning 90 days after the effective date of the registration statement of which this prospectus is a part, subject to the manner-of-sale and volume limitations, current public information and filing requirements of Rule 144, in each case, without compliance with the six-month holding period requirement of Rule 144.

As of September 30, 2014, options to purchase a total of 709,028 shares of common stock were outstanding, of which 423,427 were vested. Of the total number of shares of our common stock issuable under these options, substantially all are subject to contractual lock-up agreements with us or the underwriters described below under "Underwriting" and will become eligible for sale in accordance with Rule 701 at the expiration of those agreements.

Lock-Up Agreements

We, along with our directors, executive officers and substantially all of our other stockholders, optionholders and warrantholders, have agreed with the underwriters that, subject to specified limited exceptions, for a period of 180 days from the date of this prospectus, we and they will not without the prior written consent of Wells Fargo Securities, LLC, dispose of or hedge any shares or any securities convertible into or exchangeable for our common stock. Wells Fargo Securities, LLC and Stifel, Nicolaus & Company, Incorporated, in their sole discretion may release any of the securities subject to these lock-up agreements at any time, which, in the case of officers and directors, shall be with notice. Upon expiration of this 180-day period, certain of our stockholders and warrantholder will have the right to require us to register their shares under the Securities Act. See "—Registration Rights" below and "Description of Capital Stock—Registration Rights."

After this offering, certain of our employees, including our executive officers and directors, may enter into written trading plans that are intended to comply with Rule 10b5-1 under the Exchange Act. Sales under these trading plans would not be permitted until the expiration of the lock-up agreements relating to the offering described above.

Registration Rights

In connection with the closing of this offering, the holders of 6,369,567 shares of our common stock will be entitled to rights with respect to the registration of their shares under the Securities Act, subject to the lock-up agreements described under "—Lock-Up Agreements" above. 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 purchased by affiliates, immediately upon the effectiveness of the registration statement of which this prospectus is a part. Any sales of securities by these stockholders could have a material adverse effect on the trading price of our common stock. See the section entitled "Description of Capital Stock—Registration Rights."

Equity Incentive Plans

We intend to file with the SEC a registration statement on Form S-8 under the Securities Act registering (1) the shares of common stock subject to outstanding options under the 2011 plan and (2) the shares of common stock reserved for issuance under the 2015 plan and the ESPP. The registration statement is expected to be filed and become effective as soon as practicable after the closing of this offering. Accordingly, shares registered under the registration statement will be available for sale in the open market following its effective date, subject to the lock-up agreements described above, if applicable.

UNDERWRITING

Subject to the terms and conditions set forth in an underwriting agreement, we have agreed to sell to the underwriters named below, and the underwriters, for whom Wells Fargo Securities, LLC and Stifel, Nicolaus & Company are acting as joint book running managers and representatives, have severally agreed to purchase, the respective numbers of shares of common stock appearing opposite their names below:

Underwriter	Number of Shares
Wells Fargo Securities, LLC	
Stifel, Nicolaus & Company, Incorporated	
Needham & Company, LLC	
Oppenheimer & Co. Inc.	
Total	3,600,000

All of the shares to be purchased by the underwriters will be purchased from us.

The underwriting agreement provides that the obligations of the several underwriters are subject to various conditions, including approval of legal matters by counsel. The shares of common stock are offered by the underwriters, subject to prior sale, when, as and if issued to and accepted by them. The underwriters reserve the right to withdraw, cancel or modify the offer and to reject orders in whole or in part.

The underwriting agreement provides that the underwriters are obligated to purchase all the shares of common stock offered by this prospectus if any are purchased, other than those shares covered by the over-allotment option described below. If an underwriter defaults, the underwriting agreement provides that the purchase commitments of the non-defaulting underwriters may be increased or the underwriting agreement may be terminated.

Over-Allotment Option

We have granted a 30-day option to the underwriters to purchase up to a total of 540,000 additional shares of our common stock from us at the initial public offering price per share less the underwriting discounts and commissions per share, as set forth on the cover page of this prospectus, and less any dividends or distributions declared, paid or payable on the shares that the underwriters have agreed to purchase from us but that are not payable on such additional shares, to cover over-allotments, if any. If the underwriters exercise this option in whole or in part, then the underwriters will be severally committed, subject to the conditions described in the underwriting agreement, to purchase the additional shares of our common stock in proportion to their respective commitments set forth in the prior table.

Discounts and Commissions

Shares sold by the underwriters to the public will initially be offered at the initial public offering price set forth on the cover of this prospectus and to certain dealers at that price less a concession of not more than $ per share, of which up to $ per share may be reallowed to other dealers. After the initial offering, the public offering price, concession and reallowance to dealers may be changed.

The following table summarizes the underwriting discounts and commissions and the proceeds, before expenses, payable to us, both on a per share basis and in total, assuming either no exercise or full exercise by the underwriters of their over-allotment option:

		Total	
	Per Share	Without Option	With Option
Public offering price	$	$	$
Underwriting discounts and commissions	$	$	$
Proceeds, before expenses, to us	$	$	$

We estimate that the expenses of this offering payable by us, not including underwriting discounts and commissions, will be approximately $3.1 million. We have agreed to reimburse the underwriters up to $30,000 for expenses relating to the clearance of this offering with the Financial Industry Regulatory Authority.

Certain of our existing stockholders and their affiliated entities, including stockholders affiliated with our directors, have indicated an interest in purchasing up to approximately $8.2 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. The underwriters will receive the same underwriting discount on any shares purchased by these entities as they will on any other shares sold to the public in this offering.

Indemnification of Underwriters

The underwriting agreement provides that we will indemnify the underwriters against specified liabilities, including liabilities under the Securities Act, or contribute to payments that the underwriters may be required to make in respect of those liabilities.

Lock-Up Agreements

We, each of our directors and officers, the holders of substantially all of the other shares of our common stock outstanding prior to this offering and the holders of substantially all of our options and warrants outstanding prior to this offering, have agreed, subject to specified exceptions, that, without the prior written consent of Wells Fargo Securities, LLC and Stifel, Nicolaus & Company, Incorporated, we and they will not, during the period beginning on and including the date of this prospectus through and including the date that is the 180th day after the date of this prospectus, directly or indirectly:

- issue (in the case of us), 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, lend or otherwise transfer or dispose of any shares of our common stock or other capital stock or any securities convertible into or exercisable or exchangeable for our common stock or other capital stock;

- in the case of us, file or cause the filing of any registration statement under the Securities Act with respect to any shares of our common stock or other capital stock or any securities convertible into or exercisable or exchangeable for our common stock or other capital stock, other than registration statements on Form S-8 filed with the SEC after the closing date of this offering; or

- enter into any swap or other agreement, arrangement, hedge or transaction that transfers to another, in whole or in part, directly or indirectly, any of the economic consequences of ownership of our common stock or other capital stock or any securities convertible into or exercisable or exchangeable for our common stock or other capital stock,

whether any transaction described in any of the foregoing bullet points is to be settled by delivery of our common stock or other capital stock, other securities, in cash or otherwise, or publicly announce an intention to do any of the foregoing.

Wells Fargo Securities, LLC and Stifel, Nicolaus & Company, Incorporated may in their sole discretion and at any time or from time to time, without notice, release all or any portion of the shares or other securities subject to the lock-up agreements. Any determination to release any shares or other securities subject to the lock-up agreements would be based on a number of factors at the time of determination, which may include the market price of the common stock, the liquidity of the trading market for the common stock, general market conditions, the number of shares or other securities proposed to be sold or otherwise transferred and the timing, purpose and terms of the proposed sale or other transfer.

The NASDAQ Global Market Listing

We have applied to have our common stock listed on The NASDAQ Global Market under the symbol "TCON."

Stabilization

In order to facilitate this offering of our common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the market price of our common stock. Specifically, the underwriters may sell more shares of common stock than they are obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares of common stock available for purchase by the underwriters under the over-allotment option. The underwriters may close out a covered short sale by exercising the over-allotment option or purchasing common stock in the open market. In determining the source of common stock to close out a covered short sale, the underwriters may consider, among other things, the market price of common stock compared to the price payable under the over-allotment option. The underwriters may also sell shares of common stock in excess of the over-allotment option, creating a naked short position. The underwriters must close out any naked short position by purchasing shares of common stock 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 the common stock in the open market after the date of pricing of this offering that could adversely affect investors who purchase in this offering.

As an additional means of facilitating this offering, the underwriters may bid for, and purchase, common stock in the open market to stabilize the price of our common stock, so long as stabilizing bids do not exceed a specified maximum. The underwriting syndicate may also reclaim selling concessions allowed to an underwriter or a dealer for distributing common stock in this offering if the underwriting syndicate repurchases previously distributed common stock to cover syndicate short positions or to stabilize the price of the common stock.

The foregoing transactions, if commenced, may raise or maintain the market price of our common stock above independent market levels or prevent or retard a decline in the market price of the common stock.

The foregoing transactions, if commenced, may be effected on The NASDAQ Global Market or otherwise. Neither we nor any of the underwriters makes any representation that the

underwriters will engage in any of these transactions and these transactions, if commenced, may be discontinued at any time without notice. Neither we nor any of the underwriters makes any representation or prediction as to the direction or magnitude of the effect that the transactions described above, if commenced, may have on the market price of our common stock.

Discretionary Accounts

The underwriters have informed us that they do not intend to confirm sales to accounts over which they exercise discretionary authority in excess of 5% of the total number of shares of common stock offered by them.

Pricing of this Offering

Prior to this offering, there has been no public market for our common stock. Consequently, the initial public offering price for our common stock will be determined between us and the representatives of the underwriters. The factors to be considered in determining the initial public offering price will include:

- prevailing market conditions;
- our results of operations and financial condition;
- financial and operating information and market valuations with respect to other companies that we and the representatives of the underwriters believe to be comparable or similar to us;
- the present state of our development; and
- our future prospects.

An active trading market for our common stock may not develop. It is possible that the market price of our common stock after this offering will be less than the initial public offering price. In addition, the estimated initial public offering price range appearing on the cover of this preliminary prospectus is subject to change as a result of market conditions or other factors.

Concurrent Private Placement

NEA has indicated an interest in purchasing up to approximately $5.0 million of shares of our common stock at the initial public offering price in a proposed private placement that would close concurrently with this offering. This indication of interest is not a binding agreement or commitment to purchase, and we could determine to sell more, less or no shares to this stockholder and NEA could determine to purchase more, less or no shares in the proposed concurrent private placement. The underwriters will serve as placement agents for such concurrent private placement and will receive placement agent fees equal to 7.0% of the gross sales price of the shares of common stock sold in the concurrent private placement. The closing of this offering is not conditioned upon the closing of such concurrent private placement.

Relationships

The underwriters and/or their respective affiliates may in the future provide various financial advisory, investment banking, commercial banking and other financial services to us, for which they may receive compensation.

Sales Outside the United States

No action has been or will be taken in any jurisdiction (except in the United States) that would permit an initial public offering of the common stock, or the possession, circulation or

distribution of this prospectus or any other material relating to us or the common stock in any jurisdiction where action for that purpose is required. Accordingly, the common stock may not be offered or sold, directly or indirectly, and neither this prospectus nor any other offering material or advertisements in connection with the common stock may be distributed or published, in or from any country or jurisdiction except in compliance with any applicable rules and regulations of any such country or jurisdiction.

Each of the underwriters may arrange to sell common stock offered by this prospectus in certain jurisdictions outside the United States, either directly or through affiliates, where they are permitted to do so. In that regard, Wells Fargo Securities, LLC may arrange to sell shares in certain jurisdictions through an affiliate, Wells Fargo Securities International Limited, or WFSIL. WFSIL is a wholly-owned indirect subsidiary of Wells Fargo & Company and an affiliate of Wells Fargo Securities, LLC. WFSIL is a U.K. incorporated investment firm regulated by the Financial Services Authority. Wells Fargo Securities is the trade name for certain corporate and investment banking services of Wells Fargo & Company and its affiliates, including Wells Fargo Securities, LLC and WFSIL.

European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a "Relevant Member State") an offer to the public of any shares of common stock which are the subject of the offering contemplated by this prospectus (the "Shares") may not be made in that Relevant Member State except that an offer to the public in that Relevant Member State of any Shares may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

- to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;
- to any legal entity which has two or more of (1) an average of at least 250 employees during the last financial year; (2) a total balance sheet of more than €43,000,000; and (3) an annual net turnover of more than €50,000,000, as shown in its last annual or consolidated accounts;
- to fewer than 100 natural or legal persons (other than qualified investors as defined in the Prospectus Directive) subject to obtaining the prior consent of the representatives of the underwriters; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive,

provided that no such offer of Shares shall result in a requirement for the publication by us or any underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, 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 any Shares to be offered so as to enable an investor to decide to purchase any Shares, as the same may be varied in that 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, in the case of Early Implementing Member States) and includes any relevant implementing measure in each Relevant Member State and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

United Kingdom

This prospectus and any other material in relation to the shares described herein is only being distributed to, and is only directed at, persons in the United Kingdom that are qualified investors within the meaning of Article 2(1)(e) of the Prospective Directive ("qualified investors") that also (i) 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, (ii) who fall within Article 49(2)(a) to (d) of the Order or (iii) to whom it may otherwise lawfully be communicated (all such persons together being referred to as "relevant persons"). The shares are only available to, and any invitation, offer or agreement to purchase or otherwise acquire such shares will be engaged in only with, relevant persons. This offering memorandum and its contents are confidential and should not be distributed, published or reproduced (in whole or in part) or disclosed by recipients to any other person in the United Kingdom. Any person in the United Kingdom that is not a relevant person should not act or rely on this prospectus or any of its contents.

The distribution of this prospectus in the United Kingdom to anyone not falling within the above categories is not permitted and may contravene the Financial Services and Markets Act of 2000. No person falling outside those categories should treat this prospectus as constituting a promotion to him, or act on it for any purposes whatever. Recipients of this prospectus are advised that we, the underwriters and any other person that communicates this prospectus are not, as a result solely of communicating this prospectus, acting for or advising them and are not responsible for providing recipients of this prospectus with the protections which would be given to those who are clients of any aforementioned entities that is subject to the Financial Services Authority Rules.

France

The prospectus has not been approved either by the *Autorité des marchés financiers* or by the competent authority of another State that is a contracting party to the Agreement on the European Economic Area and notified to the *Autorité des marchés financiers*; no security has been offered or sold and will be offered or sold, directly or indirectly, to the public in France within the meaning of Article L. 411-1 of the French *Code Monétaire et Financier* except to permitted investors, or Permitted Investors, consisting of persons licensed to provide the investment service of portfolio management for the account of third parties, qualified investors (*investisseurs qualifiés*) acting for their own account and/or a limited circle of investors (*cercle restreint d'investisseurs*) acting for their own account, with "qualified investors" and "limited circle of investors" having the meaning ascribed to them in Articles L. 411-2, D. 411-1, D. 411-2, D. 411-4, D. 744-1, D. 754-1 and D. 764-1 of the French *Code Monétaire et Financier*; none of this prospectus supplement and the accompanying Prospectus or any other materials related to the offer or information contained therein relating to our securities has been released, issued or distributed to the public in France except to Permitted Investors; and the direct or indirect resale to the public in France of any securities acquired by any Permitted Investors may be made only as provided by Articles L. 411-1, L. 411-2, L. 412-1 and L. 621-8 to L. 621-8-3 of the French *Code Monétaire et Financier* and applicable regulations thereunder.

Notice to the Residents of Germany

This document has not been prepared in accordance with the requirements for a securities or sales prospectus under the German Securities Prospectus Act (*Wertpapierprospektgesetz*), the German Sales Prospectus Act (*Verkaufsprospektgesetz*), or the German Investment Act (*Investmentgesetz*). Neither the German Federal Financial Services Supervisory Authority (*Bundesanstalt fur Finanzdienstleistungsaufsicht—BaFin*) nor any other German authority has been notified of the intention to distribute the securities in Germany. Consequently, the securities may

not be distributed in Germany by way of public offering, public advertisement or in any similar manner and this document and any other document relating to the offering, as well as information or statements contained therein, may not be supplied to the public in Germany or used in connection with any offer for subscription of the securities to the public in Germany or any other means of public marketing. The securities are being offered and sold in Germany only to qualified investors which are referred to in Section 3, paragraph 2 no. 1, in connection with Section 2, no. 6, of the German Securities Prospectus Act. This document is strictly for use of the person who has received it. It may not be forwarded to other persons or published in Germany.

Switzerland

This document does not constitute a prospectus within the meaning of Art. 652a of the Swiss Code of Obligations. The shares of common stock may not be sold directly or indirectly in or into Switzerland except in a manner which will not result in a public offering within the meaning of the Swiss Code of Obligations. Neither this document nor any other offering materials relating to the shares of common stock may be distributed, published or otherwise made available in Switzerland except in a manner which will not constitute a public offer of the shares of common stock in Switzerland.

Japan

The shares of common stock 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.

LEGAL MATTERS

The validity of the issuance of our common stock offered in this prospectus will be passed upon for us by Cooley LLP, San Diego, California. Certain legal matters in connection with this offering will be passed upon for the underwriters by Latham & Watkins LLP, San Diego, California.

EXPERTS

Ernst & Young LLP, an independent registered public accounting firm, has audited our financial statements at December 31, 2012 and 2013, and for each of the years then ended. We have included our financial statements in the prospectus and elsewhere in the registration statement in reliance on Ernst & Young LLP's report, given on 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, including exhibits and schedules, under the Securities Act, with respect to the shares of common stock being offered by this prospectus. This prospectus, which constitutes part of the registration statement, does not contain all of the information in the registration statement and its exhibits. For further information with respect to us and the common stock offered by this prospectus, we refer you to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

You can read our SEC filings, including the registration statement, over the Internet at the SEC's website at www.sec.gov. You may also read and copy any document we file with the SEC at its public reference facilities at 100 F Street, NE, Washington, D.C. 20549. You may also obtain copies of these documents at prescribed rates by writing to the Public Reference Section of the SEC at 100 F Street, NE, Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities. You may also request a copy of these filings, at no cost, by writing us at 8910 University Center Lane, Suite 700, San Diego, California 92122, or telephoning us at (858) 550-0780.

Upon the closing of this offering, we will be subject to the information reporting requirements of the Exchange Act, and we will file reports, proxy statements and other information with the SEC. These reports, proxy statements and other information will be available for inspection and copying at the public reference room and web site of the SEC referred to above. We also maintain a website at www.traconpharma.com, at which, following the closing of this offering, you may access these materials free of charge as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC. Information contained on or accessible through our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only.

TRACON Pharmaceuticals, Inc.

Index to Financial Statements

Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders of
TRACON Pharmaceuticals, Inc.

We have audited the accompanying balance sheets of TRACON Pharmaceuticals, Inc. as of December 31, 2012 and 2013, and the related statements of operations, redeemable convertible preferred stock and stockholders' deficit, and cash flows for 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. We were not engaged to perform an audit of the Company's internal control over financial reporting. Our audits 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, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of TRACON Pharmaceuticals, Inc. at December 31, 2012 and 2013, and the results of its operations and its cash flows for the years then ended, in conformity with U.S. generally accepted accounting principles.

/s/ Ernst & Young LLP

San Diego, California
August 8, 2014, except for the reverse stock split described in Note 10, as to which the date is January 20, 2015

TRACON Pharmaceuticals, Inc.
Balance Sheets
(in thousands, except share and per share data)

	December 31,		September 30, 2014	Pro Forma September 30, 2014
	2012	2013	(unaudited)	(unaudited)
Assets				
Current assets:				
Cash	$ 2,459	$ 2,276	$ 39,207	
Prepaid and other assets	124	99	357	
Total current assets	2,583	2,375	39,564	
Property and equipment, net	20	20	53	
Other assets	8	24	1,689	
Total assets	$ 2,611	$ 2,419	$ 41,306	
Liabilities, Redeemable Convertible Preferred Stock and Stockholders' Deficit				
Current liabilities:				
Accounts payable and accrued expenses	$ 667	$ 1,273	$ 3,524	
Current portion of deferred revenue	—	—	4,385	
Preferred stock warrant liabilities	—	97	235	$ —
Long-term debt, current portion	—	677	4,009	
Total current liabilities	667	2,047	12,153	
Deferred rent	4	12	38	
Deferred revenue	—	—	3,286	
Accrued expenses	—	11	222	
Preferred stock purchase rights	534	—	—	
Long-term debt, less current portion	—	1,764	5,455	
Commitments and contingencies (Note 5)				
Redeemable convertible preferred stock, $0.001 par value; authorized shares—12,500,000 at December 31, 2012 and 2013 and 24,900,000 at September 30, 2014 (unaudited); issued and outstanding shares—10,250,000, 12,249,999 and 24,650,273 at December 31, 2012 and 2013 and September 30, 2014 (unaudited), respectively; liquidation preference of $49,000 and $51,700 at December 31, 2013 and September 30, 2014 (unaudited), respectively; no shares issued and outstanding, pro forma (unaudited)	19,069	23,929	49,801	—
Stockholders' deficit:				
Common stock, $0.001 par value; authorized shares—25,000,000 at December 31, 2012 and 2013 and 40,000,000 at September 30, 2014 (unaudited); issued and outstanding—1,614,851 at December 31, 2012 and 2013 and 1,623,239 at September 30, 2014 (unaudited); 7,992,806 shares issued and outstanding, pro forma (unaudited)	2	2	2	8
Additional paid-in capital	1,998	2,025	1,980	52,010
Accumulated deficit	(19,663)	(27,371)	(31,631)	(31,631)
Total stockholders' deficit	(17,663)	(25,344)	(29,649)	$ 20,387
Total liabilities, redeemable convertible preferred stock and stockholders' deficit	$ 2,611	$ 2,419	$ 41,306	

See accompanying notes.

TRACON Pharmaceuticals, Inc.
Statements of Operations
(in thousands, except share and per share data)

	Years Ended December 31,		Nine Months Ended September 30,	
	2012	2013	2013	2014
			(unaudited)	
Collaboration revenue	$ —	$ —	$ —	$ 2,558
Operating expenses:				
Research and development	3,777	6,076	4,316	5,090
General and administrative	1,449	1,484	1,096	1,394
Total operating expenses	5,226	7,560	5,412	6,484
Loss from operations	(5,226)	(7,560)	(5,412)	(3,926)
Other income (expense):				
Interest expense	—	(30)	—	(382)
Change in fair value of preferred stock purchase rights	298	(84)	(84)	—
Change in fair value of preferred stock warrant liabilities	—	(34)	—	48
Total other income (expense)	298	(148)	(84)	(334)
Net loss	(4,928)	(7,708)	(5,496)	(4,260)
Accretion to redemption value of redeemable convertible preferred stock	(216)	(248)	(183)	(202)
Net loss attributable to common stockholders	$ (5,144)	$ (7,956)	$ (5,679)	$ (4,462)
Net loss per share attributable to common stockholders, basic and diluted	$ (3.19)	$ (4.93)	$ (3.52)	$ (2.76)
Weighted-average shares outstanding, basic and diluted	1,614,851	1,614,851	1,614,851	1,614,903
Pro forma net loss per share attributable to common stockholders, basic and diluted (unaudited)		$ (1.67)		$ (0.88)
Pro forma weighted-average shares outstanding, basic and diluted (unaudited)		4,589,074		4,909,376

See accompanying notes.

TRACON Pharmaceuticals, Inc.
Statements of Redeemable Convertible Preferred Stock and Stockholders' Deficit
(in thousands, except share and per share data)

	Redeemable Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount			
Balance at December 31, 2011	8,250,000	$ 14,556	1,614,851	$ 2	$ 2,156	$ (14,735)	$ (12,577)
Issuance of Series A redeemable convertible preferred stock in July 2012 for cash of $2.00 per share, net of offering costs of $26 and preferred stock purchase rights of $323	2,000,000	4,297	—	—	—	—	—
Accretion to redemption value of redeemable convertible preferred stock	—	216	—	—	(216)	—	(216)
Stock-based compensation	—	—	—	—	58	—	58
Net loss	—	—	—	—	—	(4,928)	(4,928)
Balance at December 31, 2012	10,250,000	19,069	1,614,851	2	1,998	(19,663)	(17,663)
Issuance of Series A redeemable convertible preferred stock in May 2013 for cash of $2.00 per share, net of offering costs of $6 and preferred stock purchase rights of $618	1,999,999	4,612	—	—	—	—	—
Accretion to redemption value of redeemable convertible preferred stock	—	248	—	—	(248)	—	(248)
Stock-based compensation	—	—	—	—	275	—	275
Net loss	—	—	—	—	—	(7,708)	(7,708)
Balance at December 31, 2013	12,249,999	23,929	1,614,851	2	2,025	(27,371)	(25,344)
Issuance of Series B redeemable convertible preferred stock in September for cash of $2.1935 per share, net of offering costs of $1,530 (unaudited)	12,400,274	25,670	—	—	—	—	—
Accretion to redemption value of redeemable convertible preferred stock (unaudited)	—	202	—	—	(202)	—	(202)
Exercise of common stock options (unaudited)	—	—	8,388	—	2	—	2
Stock-based compensation (unaudited)	—	—	—	—	155	—	155
Net loss (unaudited)	—	—	—	—	—	(4,260)	(4,260)
Balance at September 30, 2014 (unaudited)	24,650,273	$ 49,801	1,623,239	$ 2	$ 1,980	$ (31,631)	$ (29,649)

See accompanying notes.

TRACON Pharmaceuticals, Inc.
Statements of Cash Flows
(in thousands)

	Years Ended December 31,		Nine Months Ended September 30,	
	2012	2013	2013	2014
			(unaudited)	
Cash flows from operating activities				
Net loss	$ (4,928)	$ (7,708)	$ (5,496)	$ (4,260)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:				
Stock-based compensation	58	275	227	155
Depreciation and amortization	6	7	5	8
Amortization of debt discount	—	4	—	61
Noncash interest	—	22	—	161
Change in fair value of preferred stock warrant liability	—	34	—	(48)
Change in fair value of preferred stock purchase rights	(298)	84	84	—
Deferred rent	—	8	3	26
Deferred revenue	—	—	—	7,671
Changes in assets and liabilities:				
Prepaid expenses and other assets	(74)	9	8	(1,100)
Accounts payable and accrued expenses	(195)	595	385	2,251
Net cash (used in) provided by operating activities	(5,431)	(6,670)	(4,784)	4,925
Cash flows from investing activities				
Purchase of property and equipment	(10)	(7)	(5)	(41)
Net cash used in investing activities	(10)	(7)	(5)	(41)
Cash flows from financing activities				
Proceeds from long-term debt	—	2,500	—	7,500
Repayment of long-term debt	—	—	—	(352)
Proceeds from sale of preferred stock, net of offering costs	3,974	3,994	3,994	25,670
Proceeds from exercise of common stock options	—	—	—	52
Costs paid in connection with initial public offering	—	—	—	(823)
Net cash provided by financing activities	3,974	6,494	3,994	32,047
Net (decrease) increase in cash	(1,467)	(183)	(795)	36,931
Cash at beginning of period	3,926	2,459	2,459	2,276
Cash at end of period	$ 2,459	$ 2,276	$ 1,664	$ 39,207
Supplemental disclosure of cash flow information				
Interest paid	$ —	$ 4	$ —	$ 141
Supplemental schedule of noncash investing and financing activities				
Exercise of stock right for preferred stock	$ 323	$ 618	$ 618	$ —
Issuance of preferred stock warrants in connection with long-term debt	$ —	$ 63	$ —	$ 186

See accompanying notes.

TRACON Pharmaceuticals, Inc.
Notes to Financial Statements
(Information as of September 30, 2014 and thereafter and for the nine months ended September 30, 2013 and 2014 is unaudited)

1. Organization and Summary of Significant Accounting Policies

Organization and Business

TRACON Pharmaceuticals, Inc. (formerly Lexington Pharmaceuticals, Inc.) (TRACON or the Company) was incorporated in the state of Delaware on October 28, 2004. TRACON is a clinical stage biopharmaceutical company focused on the development and commercialization of novel targeted therapeutics for cancer, age-related macular degeneration and fibrotic diseases. The Company's research focuses on antibodies that bind to the endoglin receptor, which is essential to angiogenesis (the process of new blood vessel formation) and a key contributor to fibrosis (tissue scarring).

Liquidity

The Company has a limited operating history and the revenue and income potential of the Company's business and market are unproven. The Company has experienced net losses and, with the exception of the nine months ended September 30, 2014, negative cash flows from operating activities since its inception. The Company expects to continue to incur net losses and negative cash flows from operating activities into the foreseeable future. Successful transition to attaining profitable operations is dependent upon achieving a level of revenue adequate to support the Company's cost structure.

The Company plans to continue to fund its losses from operations and capital funding needs through public or private equity or debt financings or other sources. If the Company is not able to secure adequate additional funding, the Company may be forced to make reductions in spending, extend payment terms with suppliers, liquidate assets where possible, or suspend or curtail planned programs. Any of these actions could materially harm the Company's business, results of operations and future prospects.

Use of Estimates

The Company's financial statements are prepared in accordance with accounting principles generally accepted in the United States (GAAP). The preparation of the Company's financial statements requires it to make estimates and assumptions that impact the reported amounts of assets, liabilities, revenue and expenses and the disclosure of contingent assets and liabilities in the Company's financial statements and accompanying notes. The most significant estimates in the Company's financial statements relate to revenue recognition and the valuation of equity awards. Although these estimates are based on the Company's knowledge of current events and actions it may undertake in the future, actual results may ultimately materially differ from these estimates and assumptions.

Unaudited Interim Financial Information

The accompanying interim balance sheet as of September 30, 2014 and the statements of operations and cash flows for the nine months ended September 30, 2013 and 2014 and the statements of redeemable convertible preferred stock and stockholders' deficit for the nine months ended September 30, 2014 and the related footnote disclosures are unaudited. These unaudited interim financial statements have been prepared in accordance with GAAP. In management's opinion, the unaudited interim financial statements have been prepared on the same basis as the audited financial statements and include all adjustments, which include only

TRACON Pharmaceuticals, Inc.
Notes to Financial Statements—(Continued)
(Information as of September 30, 2014 and thereafter and for the nine months ended September 30, 2013 and 2014 is unaudited)

normal recurring adjustments, necessary for the fair presentation of the Company's financial position as of September 30, 2014 and its results of operations and its cash flows for the nine months ended September 30, 2013 and 2014. The results for the nine months ended September 30, 2014 are not necessarily indicative of the results expected for the full fiscal year or any other period.

Unaudited Pro Forma Balance Sheet Information

The unaudited pro forma balance sheet information as of September 30, 2014 assumes the conversion of all outstanding shares of the Series A and Series B redeemable convertible preferred stock (together, redeemable convertible preferred stock) into 6,369,567 shares of the Company's common stock and the related reclassification of the carrying value of the redeemable convertible preferred stock and preferred stock warrant liabilities to additional paid-in capital upon completion of the Company's initial public offering (IPO). Shares of common stock issued in such IPO and any related net proceeds are excluded from the pro forma information.

Cash

The Company considers all highly liquid investments that have maturities of three months or less when purchased to be cash equivalents. The Company maintains its cash in a bank deposit account. As of December 31, 2012 and 2013 and September 30, 2014, the Company held no cash equivalents.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to significant concentration of credit risk consist primarily of cash. The Company maintains deposits in federally insured financial institutions in excess of federally insured limits. The Company has not experienced any losses in such accounts and management believes that the Company is not exposed to significant credit risk due to the financial position of the depository institutions in which those deposits are held.

Property and Equipment

Property and equipment is stated at cost and depreciated using the straight-line method over the estimated useful life of the related assets, which is generally five years.

Other Assets

Other assets primarily consist of the Company's deferred IPO costs. These costs represent legal, accounting and other direct costs related to the Company's efforts to raise capital through a public sale of its common stock. Future costs will be deferred until the completion of the IPO, at which time they will be reclassified to additional paid-in capital as a reduction of the IPO proceeds.

Deferred Rent

Rent expense is recorded on a straight-line basis over the term of the lease. The difference between rent expense and amounts paid under the lease agreements is recorded as deferred rent in the accompanying balance sheets.

TRACON Pharmaceuticals, Inc.
Notes to Financial Statements—(Continued)
(Information as of September 30, 2014 and thereafter and for the nine months ended September 30, 2013 and 2014 is unaudited)

Preferred Stock Warrant Liabilities

The Company has issued freestanding warrants to purchase shares of its Series A redeemable convertible preferred stock. Since the underlying Series A redeemable convertible preferred stock is classified outside of permanent equity, these preferred stock warrants are classified as liabilities in the accompanying balance sheets. The Company adjusts the carrying value of such preferred stock warrants to their estimated fair value at each reporting date, with any related increases or decreases in the fair value recorded as an increase or decrease to other income (expense) in the statements of operations. The preferred stock warrant liabilities will continue to be adjusted to fair value until such time as the preferred stock warrants are no longer outstanding or the underlying securities are no longer redeemable outside the control of the Company, including the completion of the IPO.

Revenue Recognition

The Company's revenue is derived from its license agreement with Santen Pharmaceutical Co., Ltd. (Santen) as described in Note 7. The Company recognizes revenue when all four of the following criteria are met: (1) there is persuasive evidence that an arrangement exists; (2) delivery of the products and/or services has occurred; (3) the selling price is fixed or determinable; and (4) collectibility is reasonably assured. Amounts received prior to satisfying the revenue recognition criteria are recorded as deferred revenue. Amounts not expected to be recognized as revenue within the 12 months following the balance sheet date are classified as long-term deferred revenue.

The Company evaluates multiple-element arrangements to determine: (1) the deliverables included in the arrangement and (2) whether the individual deliverables represent separate units of accounting or whether they must be accounted for as a combined unit of accounting. Deliverables are considered separate units of accounting provided that: (a) the delivered items have value to the customer on a standalone basis and (b) if the arrangement includes a general right of return relative to the delivered items, delivery or performance of the undelivered items is considered probable and substantially in the Company's control. In assessing whether an item has standalone value, the Company considers factors such as the research, manufacturing and commercialization capabilities of the partner and the availability of the associated expertise in the general marketplace. In addition, the Company considers whether the partner can use the other deliverables for their intended purpose without the receipt of the remaining elements, whether the value of the deliverable is dependent on the undelivered items and whether there are other vendors that can provide the undelivered elements.

Arrangement consideration that is fixed or determinable is allocated among the separate units of accounting using the relative selling price method. The Company uses the following hierarchy of values to estimate the selling price of each deliverable: (1) vendor-specific objective evidence of fair value; (2) third-party evidence of selling price; and (3) best estimate of selling price (BESP). The BESP reflects the Company's best estimate of what the selling price would be if the Company regularly sold the deliverable on a standalone basis. In developing the BESP for a unit of accounting, the Company considers applicable market conditions and relevant entity-specific factors, including factors that are contemplated in negotiating an arrangement and estimated costs. The Company validates the BESP for units of accounting by evaluating whether changes in the key assumptions used to determine the BESP will have a significant effect on the allocation of arrangement consideration between multiple units of accounting.

TRACON Pharmaceuticals, Inc.
Notes to Financial Statements—(Continued)
(Information as of September 30, 2014 and thereafter and for the nine months ended September 30, 2013 and 2014 is unaudited)

The Company then applies the applicable revenue recognition criteria to each of the separate units of accounting in determining the appropriate period and pattern of recognition. If there is no discernible pattern of performance and/or objectively measurable performance measures do not exist, then the Company recognizes revenue under the arrangement on a straight-line basis over the period the Company expects to complete its performance obligations.

With respect to revenue derived from reimbursement of direct, out-of-pocket expenses for research and development costs associated with collaborations, where the Company acts as a principal with discretion to choose suppliers, bear credit risk, and perform part of the services required in the transaction, the Company records revenue for the gross amount of the reimbursement. The costs associated with these reimbursements are reflected as a component of research and development expense in the statements of operations.

Milestones

The Company uses the milestone method of accounting and revenue is recognized when earned, as evidenced by written acknowledgement from the collaborator or other persuasive evidence that the milestone has been achieved and the payment is non-refundable, provided that the milestone event is substantive. A milestone event is defined as an event: (1) that can only be achieved based in whole or in part on either the Company's performance or on the occurrence of a specific outcome resulting from the Company's performance; (2) for which there is substantive uncertainty at the inception of the arrangement that the event will be achieved; and (3) that would result in additional payments being due to the Company. Events for which the occurrence is either contingent solely upon the passage of time or the result of a counterparty's performance are not considered to be milestone events. A milestone event is substantive if all of the following conditions are met: (a) the consideration is commensurate with either the Company's performance to achieve the milestone, or the enhancement of the value to the delivered item(s) as a result of a specific outcome resulting from the Company's performance to achieve the milestone; (b) the consideration relates solely to past performance; and (c) the consideration is reasonable relative to all the deliverables and payment terms (including other potential milestone consideration) within the arrangement.

The Company assesses whether a milestone is substantive at the inception of each arrangement. If a milestone is deemed non-substantive, the Company will account for that milestone payment in accordance with the multiple element arrangements guidance and recognize it consistent with the related units of accounting for the arrangement over the related performance period.

Research and Development Costs

Research and development costs, including license fees, are expensed as incurred.

Patent Costs

Costs related to filing and pursuing patent applications are recorded as general and administrative expense and expensed as incurred since recoverability of such expenditures is uncertain.

TRACON Pharmaceuticals, Inc.
Notes to Financial Statements—(Continued)
(Information as of September 30, 2014 and thereafter and for the nine months ended September 30, 2013 and 2014 is unaudited)

Stock-Based Compensation

Stock-based compensation expense represents the grant date fair value of employee stock option grants recognized as expense over the requisite service period of the awards (usually the vesting period) on a straight-line basis, net of estimated forfeitures. The Company estimates the fair value of stock option grants using the Black-Scholes option pricing model.

The Company accounts for stock options granted to non-employees using the fair value approach. These option grants, if any, are subject to periodic revaluation over their vesting terms.

Income Taxes

The Company accounts for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, deferred tax assets and liabilities are determined on the basis of the differences between the financial statements and tax basis of assets and liabilities using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized as income in the period that includes the enactment date.

The Company recognizes net deferred tax assets to the extent that the Company believes these assets are more likely than not to be realized. In making such a determination, management considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax-planning strategies and results of recent operations. If management determines that the Company would be able to realize its deferred tax assets in the future in excess of their net recorded amount, management would make an adjustment to the deferred tax asset valuation allowance, which would reduce the provision for income taxes.

The Company records uncertain tax positions on the basis of a two-step process whereby (1) management determines whether it is more likely than not that the tax positions will be sustained on the basis of the technical merits of the position and (2) for those tax positions that meet the more-likely-than-not recognition threshold, management recognizes the largest amount of tax benefit that is more than 50% likely to be realized upon ultimate settlement with the related tax authority. The Company recognizes interest and penalties related to unrecognized tax benefits within income tax expense. Any accrued interest and penalties are included within the related tax liability.

In July 2013, the Financial Accounting Standards Board (FASB) issued guidance that requires an unrecognized tax benefit, or a portion of an unrecognized tax benefit, to be presented in the financial statements as a reduction to a deferred tax asset for a net operating loss carryforward, a similar tax loss, or a tax credit carryforward, unless an exception applies. The guidance is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2013. The Company early adopted this guidance for the year ended December 31, 2013, which is reflected in the financial statements as of and for the year ended December 31, 2013. There was no material impact on the financial statements upon adoption.

TRACON Pharmaceuticals, Inc.
Notes to Financial Statements—(Continued)
(Information as of September 30, 2014 and thereafter and for the nine months ended September 30, 2013 and 2014 is unaudited)

Comprehensive Loss

Comprehensive loss is defined as a change in equity during a period from transactions and other events and circumstances from non-owner sources. Net loss and comprehensive loss were the same for all periods presented.

Net Loss Per Share

Basic net loss per share is calculated by dividing the net loss by the weighted-average shares of common stock outstanding for the period, without consideration for common stock equivalents and adjusted for the weighted-average number of common shares outstanding that are subject to repurchase. The Company has excluded 1,207 weighted-average shares subject to repurchase from the weighted-average number of common shares outstanding for the nine months ended September 30, 2014 and had no common shares subject to repurchase in the other periods presented. Diluted net loss per share is calculated by dividing the net loss by the weighted-average number of common stock equivalents outstanding for the period determined using the treasury-stock method. Dilutive common stock equivalents are comprised of redeemable convertible preferred stock, warrants for the purchase of redeemable convertible preferred stock and options outstanding under the Company's stock option plan. For all periods presented, there is no difference in the number of shares used to calculate basic and diluted shares outstanding due to the Company's net loss position.

Potentially dilutive securities not included in the calculation of diluted net loss per share because to do so would be anti-dilutive are as follows (in common stock equivalent shares):

	December 31,		September 30,	
	2012	2013	2013	2014
Redeemable convertible preferred stock outstanding	2,648,572	3,165,366	3,165,366	6,369,567
Preferred stock warrants	—	9,689	—	38,758
Common stock options	374,668	685,071	674,857	709,028
	3,023,240	3,860,126	3,840,223	7,117,353

TRACON Pharmaceuticals, Inc.
Notes to Financial Statements—(Continued)
(Information as of September 30, 2014 and thereafter and for the nine months ended September 30, 2013 and 2014 is unaudited)

Unaudited Pro Forma Net Loss Per Share

The following table summarizes our unaudited pro forma net loss per share (in thousands, except share and per share data):

	Year Ended December 31, 2013	Nine Months Ended September 30, 2014
		(unaudited)
Numerator:		
Net loss attributable to common stockholders	$ (7,956)	$ (4,462)
Change in fair value of preferred stock warrant liabilities	34	(48)
Accretion to redemption value of redeemable convertible preferred stock	248	202
Pro forma net loss attributable to common stockholders	$ (7,674)	$ (4,308)
Denominator:		
Weighted-average shares outstanding, basic and diluted	1,614,851	1,614,903
Pro forma adjustments to reflect assumed weighted-average effect of conversion of redeemable convertible preferred stock	2,974,223	3,294,473
Pro forma weighted-average shares outstanding, basic and diluted	4,589,074	4,909,376
Pro forma net loss per share attributable to common stockholders, basic and diluted	$ (1.67)	$ (0.88)

Segment Reporting

Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision-maker in making decisions regarding resource allocation and assessing performance. The Company views its operations and manages its business in one operating segment.

Recent Accounting Pronouncements

In May 2014, the FASB issued Accounting Standards Update (ASU) No. 2014-09, *Revenue from Contracts with Customers*, which converges the FASB and the International Accounting Standards Board standard on revenue recognition. Areas of revenue recognition that will be affected include, but are not limited to, transfer of control, variable consideration, allocation of transfer pricing, licenses, time value of money, contract costs and disclosures. This guidance is effective for the fiscal years and interim reporting periods beginning after December 15, 2016. The Company is currently evaluating the impact that the adoption of ASU 2014-09 will have on its financial statements and related disclosures.

In June 2014, the FASB issued ASU No. 2014-10, *Development Stage Entities (Topic 915) Elimination of Certain Financial Reporting Requirements, Including an Amendment to Variable*

TRACON Pharmaceuticals, Inc.
Notes to Financial Statements—(Continued)
(Information as of September 30, 2014 and thereafter and for the nine months ended September 30, 2013 and 2014 is unaudited)

Interest Entities Guidance in Topic 810, Consolidation. This ASU does the following, among other things: (1) eliminates the requirement to present inception-to-date information on the statements of income, cash flows, and stockholders' equity; (2) eliminates the need to label the financial statements as those of a development stage entity; (3) eliminates the need to disclose a description of the development stage activities in which the entity is engaged; and (4) amends FASB Accounting Standards Codification (ASC) 275, *Risks and Uncertainties*, to clarify that information on risks and uncertainties for entities that have not commenced planned principal operations is required. The amendments in ASU No. 2014-10 related to the elimination of Topic 915 disclosures and the additional disclosure for Topic 275 are effective for public companies for annual and interim reporting periods beginning after December 15, 2014. Early adoption is permitted. The Company has early adopted this new guidance in its financial statements for the year ended December 31, 2013, and therefore has not labeled its financial statements as those of a development stage entity or included the previously required inception-to-date information.

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 relevant conditions, events and certain management plans that are known or reasonably knowable that when, considered in the aggregate, raise substantial doubt about the entity's ability to continue as a going concern within one year after the date that the financial statements are issued, for both annual and interim periods. ASU 2014-15 also requires certain disclosures around management's plans and evaluation, as well as the plans, if any, that are intended to mitigate those conditions or events that will alleviate the substantial doubt. ASU 2014-15 is effective for fiscal years ending after December 15, 2016. The Company is currently evaluating the impact that the adoption of ASU 2014-15 will have on its financial statements and related disclosures.

2. Property and Equipment

Property and equipment consist of the following (in thousands):

	December 31,		September 30,
	2012	2013	2014
Computer and office equipment	$ 96	$ 101	$ 134
Furniture and fixtures	15	17	25
	111	118	159
Less accumulated depreciation and amortization	(91)	(98)	(106)
	$ 20	$ 20	$ 53

Depreciation expense related to property and equipment amounted to $6,000, $7,000, $5,000 and $8,000 for the years ended December 31, 2012 and 2013 and the nine months ended September 30, 2013 and 2014, respectively.

3. Fair Value Measurements

The carrying amounts of prepaid and other assets, accounts payable and accrued liabilities are considered to be representative of their respective fair values because of the short-term nature of those instruments. Based on the borrowing rates currently available to the Company for loans with similar terms, which is considered a Level 2 input, the Company believes that the

TRACON Pharmaceuticals, Inc.
Notes to Financial Statements—(Continued)
(Information as of September 30, 2014 and thereafter and for the nine months ended September 30, 2013 and 2014 is unaudited)

fair value of long-term debt approximates its carrying value. Preferred stock warrant liabilities and preferred stock purchase rights are recorded at fair value.

The accounting guidance defines fair value, establishes a consistent framework for measuring fair value and expands disclosure for each major asset and liability category measured at fair value on either a recurring or nonrecurring basis. Fair value is defined as an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. As a basis for considering such assumptions, the accounting guidance establishes a three-tier fair value hierarchy, which prioritizes the inputs used in measuring fair value as follows:

Level 1: Observable inputs such as quoted prices in active markets.

Level 2: Inputs, other than the quoted prices in active markets, that are observable either directly or indirectly.

Level 3: Unobservable inputs in which there is little or no market data, which require the reporting entity to develop its own assumptions.

The Company has no financial assets that are measured at fair value on a recurring basis. Financial liabilities that are measured at fair value on a recurring basis include the preferred stock warrant liabilities and preferred stock purchase rights. None of the Company's non-financial assets or liabilities are recorded at fair value on a non-recurring basis. No transfers between levels have occurred during the periods presented.

Liabilities measured at fair value on a recurring basis are as follows (in thousands):

		Fair Value Measurements at Reporting Date Using		
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
As of September 30, 2014:				
Preferred stock warrant liabilities	$ 235	$ —	$ —	$ 235
As of December 31, 2013:				
Preferred stock warrant liabilities	$ 97	$ —	$ —	$ 97
As of December 31, 2012:				
Preferred stock purchase rights	$ 534	$ —	$ —	$ 534

All preferred stock warrants are recorded at fair value utilizing the Black-Scholes option pricing model using significant unobservable inputs consistent with the inputs used for the Company's stock-based compensation expense adjusted for the preferred stock warrants' expected life. The preferred stock purchase rights were recorded at fair value based on the valuation model discussed in Note 6.

TRACON Pharmaceuticals, Inc.
Notes to Financial Statements—(Continued)
(Information as of September 30, 2014 and thereafter and for the nine months ended September 30, 2013 and 2014 is unaudited)

The following table provides a reconciliation of all liabilities measured at fair value using Level 3 significant unobservable inputs (in thousands):

	Warrant Liabilities	Preferred Stock Purchase Rights
Balance at December 31, 2011	$ —	$ 1,155
Exercise of preferred stock purchase rights	—	(323)
Change in fair value	—	(298)
Balance at December 31, 2012	—	534
Exercise of preferred stock purchase rights	—	(618)
Issuance of preferred stock warrants	63	—
Change in fair value	34	84
Balance at December 31, 2013	97	—
Issuance of preferred stock warrants	186	—
Change in fair value	(48)	—
Balance at September 30, 2014	$ 235	$ —

4. Long-Term Debt

Long-term debt and unamortized debt discount balances are as follows (in thousands):

	December 31, 2013	September 30, 2014
Long-term debt	$ 2,500	$ 9,648
Less debt discount, net of current portion	(25)	(56)
Long-term debt, net of debt discount	2,475	9,592
Less current portion of long-term debt	(711)	(4,137)
Long-term debt, net of current portion	$ 1,764	$ 5,455
Current portion of long-term debt	$ 711	$ 4,137
Current portion of debt discount	(34)	(128)
Current portion of long-term debt, net	$ 677	$ 4,009

In November 2013, the Company borrowed $2.5 million under a loan and security agreement with Silicon Valley Bank (SVB Loan). There is no remaining available credit under the SVB Loan. The Company is obligated to make interest-only payments through May 2014 and, beginning in June 2014, equal payments of principal and interest through the maturity date of August 1, 2016. The interest rate is a per annum fixed rate of 5.0%. The final payment due includes an additional fee of 7.0% of the loan amount, or $0.2 million, which is being accreted over the term of the debt using the effective interest method and is included in interest expense. The loan is collateralized by all assets of the Company, other than intellectual property. The SVB Loan contains customary conditions of borrowing, events of default and covenants, including covenants that restrict the Company's ability to dispose of assets, merge with or acquire other entities, incur indebtedness and make distributions to holders of the Company's capital stock.

TRACON Pharmaceuticals, Inc.
Notes to Financial Statements—(Continued)
(Information as of September 30, 2014 and thereafter and for the nine months ended September 30, 2013 and 2014 is unaudited)

Should an event of default occur, including the occurrence of a material adverse change, the Company could be liable for immediate repayment of all obligations under the SVB Loan.

In November 2013, in connection with the SVB Loan, the Company issued a warrant to purchase 37,500 shares of Series A redeemable convertible preferred stock at an exercise price of $2.00 per share. The warrant is fully exercisable and expires on November 14, 2023. The initial fair value of the warrant as of the issuance date was estimated to be $0.1 million, based on the application of the Black-Scholes option pricing model, and this discount is amortized to interest expense using the effective interest method over the term of the debt.

In June 2014, the Company entered into an amended loan and security agreement with SVB (the Amended SVB Loan). The amendment did not modify the repayment terms of the $2.5 million previously borrowed under the SVB Loan. The Amended SVB Loan provided the Company with a new $7.5 million growth capital loan facility, available to the Company in two advances at a per annum fixed interest rate of 4.5%. The first advance of $5.0 million was drawn in conjunction with securing the Amended SVB Loan in June 2014. The second advance of $2.5 million was drawn in September 2014. The Company is obligated to make interest-only payments on all outstanding advances under the Amended SVB Loan through November 30, 2014, and subsequently obligated to make monthly principal and interest payments to fully amortize the outstanding balance through the November 1, 2016 maturity date. The final payment due includes an additional fee of 9.0% of all growth capital advances, or $0.7 million, which is being accreted over the term of the debt using the effective interest method and is included in interest expense. The prepayment of loan amounts are subject to additional fees.

In June 2014, in connection with the Amended SVB Loan, the Company issued a warrant to purchase 112,500 shares of Series A redeemable convertible preferred stock at an exercise price of $2.00 per share. The warrant is fully exercisable and expires on June 4, 2024. The initial fair value of the warrant as of the issuance date was estimated to be $0.2 million, based on the application of the Black-Scholes option pricing model, and this discount is amortized to interest expense using the effective interest method over the term of the debt.

Future minimum principal and interest payments under the SVB Loan, including the final payment, as of December 31, 2013 and September 30, 2014, are as follows (in thousands):

	December 31, 2013	September 30, 2014
2014	$ 740	$ 672
2015	1,178	5,109
2016	960	5,239
	2,878	11,020
Less interest and final payment	(378)	(1,372)
Long-term debt	$ 2,500	$ 9,648

TRACON Pharmaceuticals, Inc.
Notes to Financial Statements—(Continued)
(Information as of September 30, 2014 and thereafter and for the nine months ended September 30, 2013 and 2014 is unaudited)

5. Commitments and Contingencies

Facility Lease

The Company leases its office space under a non-cancelable operating lease that expires in April 2017. The lease is subject to base lease payments and additional charges for common area maintenance and other costs. Rent expense for each of the years ended December 31, 2012 and 2013 and the nine months ended September 30, 2013 and 2014 was $0.1 million.

Future minimum payments under the non-cancelable operating lease as of December 31, 2013 are as follows (in thousands):

	Operating Lease
2014	$ 102
2015	131
2016	136
2017	47
	$ 416

In September 2014, the Company amended its facility lease to add additional office space. The Company's total future minimum payments under the agreement increased by approximately $0.2 million and the April 2017 expiration date remained unchanged.

License Agreements

The Company has entered into various license agreements pursuant to which the Company acquired licenses to certain intellectual property. The agreements generally required an upfront license fee and, in some cases, reimbursement of patent costs. Additionally, under each agreement, the Company may be required to pay annual maintenance fees, royalties, milestone payments and sublicensing fees. Each of the license agreements is generally cancelable by the Company, given appropriate prior written notice. Potential future milestone payments under these agreements total an aggregate of approximately $22.1 million.

6. Redeemable Convertible Preferred Stock and Stockholders' Deficit

Redeemable Convertible Preferred Stock

The Company classifies its redeemable convertible preferred stock outside of permanent equity since such stock is contractually redeemable outside of the Company's control. As a result, the carrying value is increased to its redemption value by periodic accretion charges over the estimated redemption period. In the absence of retained earnings, these accretion charges are recorded against additional paid-in capital.

In March 2011, the Company received commitments for the sale of 12,249,999 shares of Series A redeemable convertible preferred stock at $2.00 per share, with gross proceeds of $24.5 million. The Company sold 7,000,001 shares in March 2011 (Initial Closing) for gross proceeds of $14.0 million, and 1,249,999 shares were issued related to the conversion of $2.5 million in debt and accrued interest in the Initial Closing. Included in the terms of the Series A preferred stock purchase agreement were certain rights granted to the holders of the

TRACON Pharmaceuticals, Inc.
Notes to Financial Statements—(Continued)
(Information as of September 30, 2014 and thereafter and for the nine months ended September 30, 2013 and 2014 is unaudited)

original Series A redeemable convertible preferred stock issued in the Initial Closing that obligated the Company to deliver an additional 4,000,000 shares at $2.00 per share within 12 months of the Initial Closing (Second Closing). The Company determined that its obligation to issue additional shares of the Company's Series A redeemable convertible preferred stock represented a freestanding financial instrument that required liability accounting. This freestanding preferred stock purchase right liability was initially recorded at fair value, with fair value changes recognized as increases in or decreases to the change in fair value of preferred stock purchase rights in the statements of operations.

The estimated fair value of the preferred stock purchase rights was determined using a valuation model that considered the probability of achieving a milestone, if any, the entity's cost of capital, the estimated time period the preferred stock right would be outstanding, consideration received for the Series A redeemable convertible preferred stock, the number of shares to be issued to satisfy the preferred stock purchase right and at what price, and any changes in the fair value of the underlying Series A redeemable convertible preferred stock. As of the Initial Closing, the estimated fair value of the preferred stock purchase rights was determined to be $1.1 million. The Company revalued the preferred stock purchase rights to $1.2 million at December 31, 2011 and recorded the $0.1 million increase in fair value as other expense in the statement of operations.

In July 2012, the Company amended and restated the Series A preferred stock purchase agreement to extend and modify the Second Closing to provide instead for two closings of 2,000,000 shares each at $2.00 per share, with the first of the two closings to occur prior to July 13, 2012. In July 2012, the Company issued an additional 2,000,000 shares of Series A redeemable convertible preferred stock for $2.00 per share to current investors. The Company revalued the preferred stock purchase rights in July 2012 to account for the change in fair value at the date of the amendment and recorded other income of $0.3 million in the statement of operations. The Company revalued the remaining preferred stock purchase rights related to the third closing at December 31, 2012, at $0.5 million and recorded $15,000 of other expense in the statement of operations. In May 2013, the Company issued an additional 1,999,999 shares of Series A redeemable convertible preferred stock for $2.00 per share to current investors. The Company revalued the preferred stock purchase rights in May 2013 to account for the change in fair value at the date of the final closing and recorded the $0.1 million increase in fair value as other expense in the statement of operations.

In September 2014, the Company amended and restated its restated certificate of incorporation to, among other things, (1) increase its authorized shares of common stock from 25,000,000 to 40,000,000 shares, (2) increase its authorized shares of preferred stock from 12,500,000 to 24,900,000 shares, of which 12,500,000 shares are designated as Series B redeemable convertible preferred stock, and (3) set forth the rights, preferences and privileges of the Series B redeemable convertible preferred stock.

In September 2014, pursuant to a Series B stock purchase agreement, the Company issued an aggregate of 12,400,274 shares of its Series B redeemable convertible preferred stock at a purchase price of approximately $2.19 per share, for aggregate consideration of $27.2 million. In connection with the sale of the Series B redeemable convertible preferred stock, the Company paid Brookline Group, LLC, an affiliate of a holder of more than five percent of the Company's common stock, a fee totaling approximately $96,000 as consideration for acting as a nonexclusive placement agent for the Series B preferred stock financing.

TRACON Pharmaceuticals, Inc.
Notes to Financial Statements—(Continued)
(Information as of September 30, 2014 and thereafter and for the nine months ended September 30, 2013 and 2014 is unaudited)

At September 30, 2014, the authorized, issued and outstanding shares of redeemable convertible preferred stock by series were as follows (in thousands, except share and per share data):

	Shares		Liquidation Preference Per Share	Liquidation Preference and Redemption Value	Carrying Value
	Authorized	Outstanding			
Series A	12,400,000	12,249,999	$ 2.00	$ 24,500	$ 24,119
Series B	12,500,000	12,400,274	2.19	27,200	25,682
	24,900,000	24,650,273		$ 51,700	$ 49,801

The redeemable convertible preferred stock has the following characteristics:

Dividends

The holders of the Series A and Series B redeemable convertible preferred stock are entitled to receive noncumulative dividends at an annual rate of $0.16 per share and $0.17548 per share, respectively. The redeemable convertible preferred stock dividends are payable when and if declared by the board of directors. The redeemable convertible preferred stock dividends are payable in preference and in priority to any dividends on common stock. There have been no dividends declared through September 30, 2014.

Liquidation

In the event of any liquidation, dissolution, or winding up of the Company, the holders of Series B redeemable convertible preferred stock will be entitled to receive, in preference to the holders of Series A redeemable convertible preferred stock and common stock, the amount of $2.1935 per share, plus declared and unpaid dividends, if any. After the holders of Series B redeemable convertible preferred stock have received their full liquidation preference, the holders of Series A redeemable convertible preferred stock will be entitled to receive, in preference to the holders of common stock, the amount of $2.00 per share, plus declared and unpaid dividends, if any. Thereafter, any remaining assets of the Company will be distributed pro rata based on the number of shares of common stock held by each stockholder, treating each share of redeemable convertible preferred stock as if it were converted into shares of common stock at the then-applicable conversion rate.

Redemption

At any time on or after September 19, 2019, the holders of at least a majority of the then-outstanding shares of redeemable convertible preferred stock may require the Company to redeem all of the outstanding shares of Series A and Series B redeemable convertible preferred stock by payment in cash, in three annual installments, of $2.00 per share and $2.1935 per share, respectively, plus an amount equal to any declared but unpaid dividends on such shares of Series A and Series B redeemable convertible preferred stock in exchange for the Series A and Series B redeemable convertible preferred stock to be redeemed.

TRACON Pharmaceuticals, Inc.
Notes to Financial Statements—(Continued)
(Information as of September 30, 2014 and thereafter and for the nine months ended September 30, 2013 and 2014 is unaudited)

Conversion

Each share of redeemable convertible preferred stock is convertible into 0.2584 shares of common stock. Each share of redeemable convertible preferred stock will be automatically converted into common stock immediately upon the earlier of (1) the Company's sale of its common stock in a firm commitment underwritten public offering pursuant to a registration statement under the Securities Act of 1933, as amended, in which the gross cash proceeds are at least $30.0 million or (2) the date specified by written consent or agreement of the holders of a majority of the then-outstanding shares of redeemable convertible preferred stock voting together as a class.

Voting

The holders of redeemable convertible preferred stock are entitled to one vote for each share of common stock into which such redeemable convertible preferred stock could then be converted; and with respect to such vote, such holder shall have full voting rights and powers equal to the voting rights and powers of the holders of common stock. Also, the preferred stockholders have been granted certain rights with regard to the election of members of the Company's board of directors and various other corporate actions.

Stock Option Plan

On August 10, 2011, the Company adopted the TRACON Pharmaceuticals, Inc. 2011 Equity Incentive Plan (the 2011 Plan), and, as amended, reserved 1,070,976 shares of common stock for issuance pursuant to the 2011 Plan.

The 2011 Plan provides for the grant of incentive stock options, non-statutory stock options, stock appreciation rights (SARs), restricted stock grants and restricted stock units to eligible recipients. Recipients of incentive stock options are eligible to purchase shares of the Company's common stock at an exercise price equal to no less than the estimated fair market value of such stock on the date of grant. The maximum term of options granted under the 2011 Plan is no more than ten years. Grants generally vest on the last day of each month over 48 months from the vesting commencement date.

Stock option activity under the 2011 Plan is summarized as follows:

	Number of Options	Weighted-Average Exercise Price
Balance at December 31, 2012	374,668	$ 0.70
Granted	310,403	1.34
Balance at December 31, 2013	685,071	0.99
Granted	70,347	5.36
Canceled	(38,002)	0.95
Exercised	(8,388)	6.23
Balance at September 30, 2014	709,028	1.36

TRACON Pharmaceuticals, Inc.
Notes to Financial Statements—(Continued)
(Information as of September 30, 2014 and thereafter and for the nine months ended September 30, 2013 and 2014 is unaudited)

Information about the Company's outstanding stock options is as follows (in thousands, except share and per share data and contractual term):

	Number of Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value
September 30, 2014:				
Options outstanding	709,028	$ 1.36	7.89	$ 4,027
Options vested and expected to vest	709,028	$ 1.36	7.89	$ 4,027
Options exercisable	423,427	$ 0.89	7.42	$ 2,607
December 31, 2013:				
Options outstanding	685,071	$ 0.99	8.45	$ 1,125
Options vested and expected to vest	685,071	$ 0.99	8.45	$ 1,125
Options exercisable	289,699	$ 0.78	7.94	$ 535

The weighted-average grant date fair value per share of employee option grants during the year ended December 31, 2013 and the nine months ended September 30, 2013 and 2014 was $1.04, $1.04 and $4.49, respectively.

Stock-Based Compensation Expense

The weighted-average assumptions used in the Black-Scholes option pricing model to determine the fair value of the employee stock option grants were as follows:

	Years Ended December 31,		Nine Months Ended September 30,	
	2012	2013	2013	2014
Risk-free interest rate	1.3%	1.1%	1.1%	1.9%
Expected volatility	109.8%	94.9%	95.2%	78.5%
Expected term (in years)	6.3	6.3	6.3	6.3
Expected dividend yield	0.0%	0.0%	0.0%	0.0%

Risk-free interest rate. The Company bases the risk-free interest rate assumption on the U.S. Treasury's rates for U.S. Treasury zero-coupon bonds with maturities similar to those of the expected term of the award being valued.

Expected volatility. The expected volatility assumption is based on volatilities of a peer group of similar companies whose share prices are publicly available. The peer group was developed based on companies in the biotechnology industry.

Expected term. The expected term represents the period of time that options are expected to be outstanding. Because the Company does not have historical exercise behavior, it determines the expected life assumption using the simplified method, which is an average of the contractual term of the option and its vesting period.

TRACON Pharmaceuticals, Inc.
Notes to Financial Statements—(Continued)
(Information as of September 30, 2014 and thereafter and for the nine months ended September 30, 2013 and 2014 is unaudited)

Expected dividend yield. The Company bases the expected dividend yield assumption on the fact that it has never paid cash dividends and has no present intention to pay cash dividends.

The allocation of stock-based compensation is as follows (in thousands):

	Years Ended December 31,		Nine Months Ended September 30,	
	2012	2013	2013	2014
Research and development	$ 47	$ 184	$ 153	$ 112
General and administrative	11	91	74	43
	$ 58	$ 275	$ 227	$ 155

As of December 31, 2013 and September 30, 2014, the unrecognized compensation cost related to outstanding employee options was $0.4 million and $0.5 million, respectively, and is expected to be recognized as expense over approximately 2.5 years and 2.7 years, respectively.

Common Stock Reserved for Future Issuance

Common stock reserved for future issuance is as follows:

	December 31, 2013	September 30, 2014
Conversion of redeemable convertible preferred stock	3,165,366	6,369,567
Preferred stock warrants	9,689	38,758
Common stock options granted and outstanding	685,071	709,028
Awards available under the 2011 Plan	158,515	353,560
	4,018,641	7,470,913

7. Collaboration

In March 2014, the Company entered into a license agreement with Santen, under which the Company granted Santen an exclusive, worldwide license to certain patents, information and know-how related to TRC105. Under the agreement, Santen is permitted to use, develop, manufacture and commercialize TRC105 products for ophthalmology indications, excluding systemic treatment of ocular tumors. Santen also has the right to grant sublicenses to affiliates and third party collaborators. In the event Santen sublicenses any of its rights under the agreement, Santen will be obligated to pay the Company a portion of any upfront and certain milestone payments received under such sublicense.

Santen has sole responsibility for funding, developing, seeking regulatory approval for and commercializing TRC105 products in the field of ophthalmology. In the event that Santen fails to meet certain commercial diligence obligations, the Company will have the option to co-promote TRC105 products in the field of ophthalmology in the United States with Santen. If the Company exercises this option, the Company will pay Santen a percentage of certain development

TRACON Pharmaceuticals, Inc.
Notes to Financial Statements—(Continued)
(Information as of September 30, 2014 and thereafter and for the nine months ended September 30, 2013 and 2014 is unaudited)

expenses, and the Company will receive a percentage of profits from sales of the licensed products in the ophthalmology field in the United States, but will not also receive royalties on such sales.

In consideration of the rights granted to Santen under the agreement, the Company received a one-time upfront fee of $10.0 million. The license agreement provides for various types of payments, including the upfront payment, payment for various technical and regulatory support, payments for delivery of drug substance, reimbursement of certain development costs, milestone payments, and royalties on net product sales. The Company has identified multiple deliverables, which include at inception: (1) a license to patents, information and know-how related to TRC105, (2) technology transfer, (3) collaboration, including technical and regulatory support provided by the Company, (4) manufacturing and supply obligations, and (5) shared chemistry, manufacturing and controls (CMC) development activities. Deliverables 1 and 2 above were substantially delivered at the inception of the agreement, and deliverables 3 through 5 are expected to be delivered during the estimated 31-month period over which the Company will provide technical and regulatory support to Santen. At inception and through September 30, 2014, the Company has identified one single unit of accounting for all the deliverables under the agreement since the delivered elements do not have standalone value. The Company's technical and regulatory expertise, including manufacturing and CMC activities, in the development of biologic therapeutics, specifically TRC105, is a significant component of Santen's ability to utilize the license and know-how related to TRC105. Given the early stage of development of TRC105 for ophthalmology, the Company is the only party capable of performing the level and type of technical and regulatory collaboration services required by Santen under the agreement. As a result, the Company has determined that the license, including the ability to sublicense, and know-how related to TRC105 do not have standalone value to a licensee. As such, the Company is recognizing revenue for the fixed or determinable collaboration consideration on a straight-line basis over the estimated 31-month period over which it will deliver its technical and regulatory support.

In addition, the Company is eligible to receive up to a total of $155.0 million in milestone payments upon the achievement of certain milestones, of which $20.0 million relates to the initiation of certain development activities, $52.5 million relates to the submission of certain regulatory filings and receipt of certain regulatory approvals and $82.5 million relates to commercialization activities and the achievement of specified levels of product sales. The Company has determined that $10.0 million related to the initiation of certain clinical development activities will be based upon its efforts and meet the criteria of substantive milestones and therefore will be recognized as revenue upon achievement of the milestone in accordance with the milestone method of accounting. The remaining $145.0 million of potential milestone payments are not substantive milestones as they do not require the efforts of the Company. As of September 30, 2014, the Company has not achieved any milestones under the agreement.

If TRC105 products are successfully commercialized in the field of ophthalmology, Santen will be required to pay the Company tiered royalties on net sales ranging from high single digits to low teens, depending on the volume of sales, subject to adjustments in certain circumstances. In addition, Santen will reimburse the Company for all royalties due by the Company under certain third party agreements with respect to the use, manufacture or commercialization of TRC105 products in the field of ophthalmology by Santen and its affiliates

TRACON Pharmaceuticals, Inc.
Notes to Financial Statements—(Continued)
(Information as of September 30, 2014 and thereafter and for the nine months ended September 30, 2013 and 2014 is unaudited)

and sublicensees. Royalties will continue on a country-by-country basis through the later of the expiration of the Company's patent rights applicable to the TRC105 products in a given country or 12 years after the first commercial sale of the first TRC105 product commercially launched in such country.

Santen may unilaterally terminate this agreement in its entirety, or on a country-by-country basis, upon written notice to the Company. Either party may terminate the agreement in the event of the other party's bankruptcy or dissolution or for the other party's material breach of the agreement that remains uncured 90 days (or 30 days with respect to a payment breach) after receiving notice from the non-breaching party. Unless earlier terminated, the agreement continues in effect until the termination of Santen's payment obligations.

In connection with the collaboration with Santen, the Company recognized revenue of $2.6 million for the nine months ended September 30, 2014 and had deferred revenue of $7.7 million as of September 30, 2014.

8. Income Taxes

A reconciliation of the Company's effective tax rate and federal statutory tax rate is summarized as follows (in thousands):

	Years Ended December 31,	
	2012	2013
Federal income taxes	$ (1,676)	$ (2,620)
State income taxes, net of federal benefit	(301)	(427)
Permanent items	(80)	131
Research credits	(50)	(356)
Other, net	—	272
Intangible deferred adjustment	—	492
Change in valuation allowance	2,107	2,508
Provision for income taxes	$ —	$ —

Significant components of the Company's deferred tax assets are summarized as follows (in thousands):

	December 31,	
	2012	2013
Deferred tax assets:		
Net operating loss carryforwards	$ 3,974	$ 6,862
Research and development credits	367	469
Depreciation and amortization	699	185
Other, net	142	174
Total deferred tax assets	5,182	7,690
Valuation allowance	(5,182)	(7,690)
Net deferred tax assets	$ —	$ —

TRACON Pharmaceuticals, Inc.
Notes to Financial Statements—(Continued)
(Information as of September 30, 2014 and thereafter and for the nine months ended September 30, 2013 and 2014 is unaudited)

The Company has net deferred tax assets relating primarily to net operating loss (NOL) carryforwards and research and development credit carryforwards. Subject to certain limitations, the Company may use these deferred tax assets to offset taxable income in future periods. Due to the Company's history of losses and uncertainty regarding future earnings, a full valuation allowance has been recorded against the Company's deferred tax assets, as it is more likely than not that such assets will not be realized. The net change in the total valuation allowance for the years ended December 31, 2012 and 2013 was $2.1 million and $2.5 million, respectively.

At December 31, 2013, the Company had federal and California NOL carryforwards of approximately $17.2 million and $17.2 million, respectively, net of Internal Revenue Code (the Code) Section 382 limitations. The federal and California NOL carryforwards will begin to expire in 2029, unless previously utilized. At December 31, 2013, the Company also had federal and California research and development credit carryforwards of approximately $0.5 million and $0.3 million, net of Section 383 limitations, respectively. The federal research and development credit carryforwards will begin expiring in 2031 unless previously utilized. The California research credit will carry forward indefinitely.

Pursuant to Sections 382 and 383 of the Code, annual use of the Company's NOL and research and development credit carryforwards may be limited in the event that a cumulative change in ownership of more than 50% occurs within a three-year period. The Company has completed a Section 382/383 analysis, regarding the limitation of net operating loss and research and development credit carryforwards as of December 31, 2011. As a result of the analysis, an ownership change was determined to have occurred. Based on this ownership change, the deferred tax assets for federal NOLs and federal research and development credits of $1.1 million and $1.8 million, respectively, have been removed from the deferred tax asset schedule. Further, also as a result of the change, the deferred tax assets for California NOLs and California research and development credits of $0.4 million and $0.2 million, respectively, have been removed from the deferred tax asset schedule. The Company has recorded a corresponding decrease in the valuation allowance. The Company will continue to consider changes in ownership that may cause losses of tax attributes in the future.

The changes in the Company's unrecognized tax benefits are summarized as follows (in thousands):

Balance at December 31, 2011	$ 205
Increase related to current year positions	25
Balance at December 31, 2012	230
Decrease related to prior year positions	(15)
Increase related to current year positions	62
Balance at December 31, 2013	$ 277

The Company's policy is to include interest and penalties related to unrecognized income tax benefits as a component of income tax expense. The Company has no accruals for interest or penalties in the accompanying balance sheets as of December 31, 2012 and 2013 and has not recognized interest or penalties in the accompanying statements of operations for the years ended December 31, 2012 and 2013.

TRACON Pharmaceuticals, Inc.
Notes to Financial Statements—(Continued)
(Information as of September 30, 2014 and thereafter and for the nine months ended September 30, 2013 and 2014 is unaudited)

Due to the valuation allowance recorded against the Company's deferred tax assets, future changes in unrecognized tax benefits will not impact the Company's effective tax rate. The Company does not expect its unrecognized tax benefits to change significantly in the next 12 months.

The Company is subject to taxation in the United States and California. Due to the net operating loss carryforwards, the U.S. federal and California returns are open to examination for all years since inception. The Company has not been, nor is it currently, under examination by the federal or any state tax authority.

9. 401(k) Plan

The Company maintains a defined contribution 401(k) plan available to eligible employees. Employee contributions are voluntary and are determined on an individual basis, limited to the maximum amount allowable under federal tax regulations. The Company, at its discretion, may make certain matching contributions to the 401(k) plan. Matching contributions for the years ended December 31, 2012 and 2013 and the nine months ended September 30, 2013 and 2014 were $46,000, $55,000, $43,000 and $56,000, respectively.

10. Subsequent Events

The Company has completed an evaluation of all subsequent events through January 20, 2015 to ensure that this filing includes appropriate disclosure of events both recognized in the September 30, 2014 financial statements and events which occurred but were not recognized in the financial statements. Except as described below, the Company has concluded that no subsequent event has occurred that requires disclosure.

Stock Option Grant

On October 3, 2014, the board of directors granted options to purchase 327,429 shares of common stock to employees and a director at an exercise price of $7.04 per share.

Sponsored Research Agreement with Tufts Medical Center, Inc.

In December 2014, the Company entered into a Sponsored Research Agreement (SRA) with Tufts Medical Center, Inc. (Tufts MC), pursuant to which Tufts MC will conduct research in cardiac fibrosis. The Company funded the $150,000 total fee upon execution of the agreement.

The SRA also provides for the Company and Tufts MC to negotiate, in good faith, an exclusive license agreement under which the Company would obtain specific rights to certain of Tufts MC's pre-existing intellectual property related to the treatment of cardiac fibrosis, as well as any new intellectual property generated from the research performed under the SRA.

Approval of 2015 Equity Incentive Award Plan

Effective January 1, 2015, the Company's board of directors adopted the 2015 Equity Incentive Award Plan (the 2015 Plan) and the Company expects its stockholders to approve the 2015 Plan prior to the effectiveness of the IPO. Under the 2015 Plan, the Company may grant stock options, stock appreciation rights, restricted stock, restricted stock units and other awards to individuals who are then employees, officers, non-employee directors or consultants of the

TRACON Pharmaceuticals, Inc.
Notes to Financial Statements—(Continued)
(Information as of September 30, 2014 and thereafter and for the nine months ended September 30, 2013 and 2014 is unaudited)

Company or its subsidiaries. A total of 801,033 shares of common stock will initially be reserved for issuance under the 2015 Plan. In addition, the number of shares of common stock available for issuance under the 2015 Plan will be annually increased on the first day of each fiscal year during the term of the 2015 Plan, beginning with the 2016 fiscal year, by an amount equal to 4% of the total number of shares of Capital Stock outstanding on December 31st of the preceding calendar year or such other amount as the Company's board of directors may determine.

Approval of the Employee Stock Purchase Plan

Effective January 1, 2015, the Company's board of directors adopted the Employee Stock Purchase Plan (the ESPP) and the Company expects its stockholders to approve the ESPP prior to the effectiveness of the IPO. The ESPP will become effective on the day prior to the effectiveness of the IPO. The ESPP permits participants to purchase common stock through payroll deductions of up to 15% of their eligible compensation. A total of 183,462 shares of common stock will initially be reserved for issuance under the ESPP. In addition, the number of shares of common stock available for issuance under the ESPP will be annually increased on the first day of each fiscal year during the term of the ESPP, beginning with the 2014 fiscal year, by an amount equal to the lessor of: (i) 366,925 shares; (ii) 1% of the total number of shares of Capital Stock outstanding on December 31st of the preceding calendar year; or (iii) such other amount as the Company's board of directors may determine.

Reverse Stock Split

On January 16, 2015, the Company effected a one-for-3.87 reverse stock split of its common stock (the Reverse Stock Split). The par value and the authorized shares of the common stock were not adjusted as a result of the Reverse Stock Split. All issued and outstanding common stock and the conversion ratio of the redeemable convertible preferred stock have been retroactively adjusted to reflect this Reverse Stock Split for all periods presented.

Table of Contents

TRACON Pharmaceuticals, Inc.

3,600,000 Shares

Common Stock

PROSPECTUS

, 2015

Wells Fargo Securities
Stifel
Needham & Company
Oppenheimer & Co.

Through and including , 2015 (25 days after the commencement of this offering), all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This delivery is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to its unsold allotments or subscriptions.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth all costs and expenses, other than underwriting discounts and commissions, payable by TRACON Pharmaceuticals, Inc. (the "Registrant") in connection with the sale of the common stock being registered. All amounts shown are estimates except for the Securities and Exchange Commission (the "SEC") registration fee, the Financial Industry Regulatory Authority, Inc. ("FINRA") filing fee and the NASDAQ Global Market listing fee.

	Amount to be paid
SEC registration fee	$ 6,735
FINRA filing fee	9,194
NASDAQ Global Market listing fee	125,000
Blue sky qualification fees and expenses	20,000
Printing and engraving expenses	250,000
Legal fees and expenses	1,100,000
Accounting fees and expenses	950,000
Transfer agent and registrar fees and expenses	25,000
Miscellaneous expenses	600,000
Total	$ 3,085,929

Item 14. Indemnification of Directors and Officers.

The Registrant is incorporated under the laws of the State of Delaware. Section 145 of the Delaware General Corporation Law provides that a Delaware corporation may indemnify any persons who were, are, or are threatened to be made, parties to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation), by reason of the fact that such person is or was an officer, director, employee or agent of such corporation, or is or was serving at the request of such corporation as an officer, director, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, provided that such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests and, with respect to any criminal action or proceeding, had no reasonable cause to believe that his or her conduct was illegal. A Delaware corporation may indemnify any persons who were, are, or are threatened to be made, a party to any threatened, pending or completed action or suit by or in the right of the corporation by reason of the fact that such person is or was a director, officer, employee or agent of such corporation, or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit, provided such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests, except that no indemnification is permitted without judicial approval if the officer or director is adjudged to be liable to the corporation. Where an officer or director is successful on the merits or otherwise in the defense of any action referred to above, the corporation must indemnify him or her against the expenses (including attorneys' fees) actually and reasonably incurred.

The Registrant's amended and restated certificate of incorporation and amended and restated bylaws, each of which will become effective immediately prior to the closing of this offering, provide for the indemnification of its directors and officers to the fullest extent permitted under the Delaware General Corporation Law.

Section 102(b)(7) of the Delaware General Corporation Law permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duties as a director, except for liability for any:

- transaction from which the director derives an improper personal benefit;
- act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payment of dividends or redemption of shares; or
- breach of a director's duty of loyalty to the corporation or its stockholders.

The Registrant's amended and restated certificate of incorporation includes such a provision. Expenses incurred by any officer or director in defending any such action, suit or proceeding in advance of its final disposition shall be paid by the Registrant upon delivery to it of an undertaking, by or on behalf of such director or officer, to repay all amounts so advanced if it shall ultimately be determined that such director or officer is not entitled to be indemnified by the Registrant.

Section 174 of the Delaware General Corporation Law provides, among other things, that a director who willfully or negligently approves of an unlawful payment of dividends or an unlawful stock purchase or redemption, may be held liable for such actions. A director who was either absent when the unlawful actions were approved or dissented at the time may avoid liability by causing his or her dissent to such actions to be entered in the books containing minutes of the meetings of the board of directors at the time such action occurred or immediately after such absent director receives notice of the unlawful acts.

As permitted by the Delaware General Corporation Law, the Registrant has entered into indemnity agreements with each of its directors and executive officers that require the Registrant to indemnify such persons against any and all costs and expenses (including attorneys', witness or other professional fees) actually and reasonably incurred by such persons in connection with any action, suit or proceeding (including derivative actions), whether actual or threatened, to which any such person may be made a party by reason of the fact that such person is or was a director or officer or is or was acting or serving as an officer, director, employee or agent of the Registrant or any of its affiliated enterprises. Under these agreements, the Registrant is not required to provided indemnification for certain matters, including:

- indemnification beyond that permitted by the Delaware General Corporation Law;
- indemnification for any proceeding with respect to the unlawful payment of remuneration to the director or officer;
- indemnification for certain proceedings involving a final judgment that the director or officer is required to disgorge profits from the purchase or sale of the Registrant's stock;
- indemnification for proceedings involving a final judgment that the director's or officer's conduct was in bad faith, knowingly fraudulent or deliberately dishonest or constituted willful misconduct or a breach of his or her duty of loyalty, but only to the extent of such specific determination;

- indemnification for proceedings or claims brought by an officer or director against the Registrant or any of the Registrant's directors, officers, employees or agents, except for (1) claims to establish a right of indemnification or proceedings, (2) claims approved by the Registrant's board of directors, (3) claims required by law, (4) when there has been a change of control as defined in the indemnification agreement with each director or officer, or (5) by the Registrant in its sole discretion pursuant to the powers vested to the Registrant under Delaware law;

- indemnification for settlements the director or officer enters into without the Registrant's consent; or

- indemnification in violation of any undertaking required by the Securities Act of 1933, as amended (the "Securities Act") or in any registration statement filed by the Registrant.

The indemnification agreements also set forth certain procedures that will apply in the event of a claim for indemnification thereunder.

Except as otherwise disclosed under the heading "Legal Proceedings" in the "Business" section of the prospectus included in this registration statement, there is at present no pending litigation or proceeding involving any of the Registrant's directors or executive officers as to which indemnification is required or permitted, and the Registrant is not aware of any threatened litigation or proceeding that may result in a claim for indemnification.

The Registrant has an insurance policy in place that covers its officers and directors with respect to certain liabilities, including liabilities arising under the Securities Act or otherwise.

The Registrant plans to enter into an underwriting agreement which provides that the underwriters are obligated, under some circumstances, to indemnify the Registrant's directors, officers and controlling persons against specified liabilities, including liabilities under the Securities Act.

Item 15. Recent Sales of Unregistered Securities.

The following sets forth information regarding all unregistered securities issued and sold by the Registrant since July 31, 2011:

(1) In July 2012 and May 2013, pursuant to a Series A preferred stock purchase agreement, the Registrant issued and sold to investors an aggregate of 3,999,999 shares of its Series A redeemable convertible preferred stock, at a purchase price of $2.00 per share, for aggregate gross consideration of $8.0 million.

(2) In November 2013, the Registrant issued a warrant to purchase 37,500 shares of its Series A redeemable convertible preferred stock to Silicon Valley Bank under its loan and security agreement, with an exercise price of $2.00 per share.

(3) Between September 20, 2011 and January 20, 2015, the Registrant granted stock options under its 2011 Equity Incentive Plan to purchase up to an aggregate of 1,150,288 shares of its common stock to its employees and directors, at exercise prices per share ranging from $0.70 to $7.04. Options to purchase a total of 19,003 of these shares were exercised through January 20, 2015.

(4) In June 2014, the Registrant issued a warrant to purchase 112,500 shares of its Series A redeemable convertible preferred stock to Silicon Valley Bank under its amended loan and security agreement, with an exercise price of $2.00 per share.

(5) In September 2014, pursuant to a Series B stock purchase agreement, the Registrant issued an aggregate of 12,400,274 shares of its Series B redeemable convertible

preferred stock at a purchase price of approximately $2.19 per share, for aggregate consideration of $27.2 million.

The offers, sales and issuances of the securities described in paragraphs (1), (2), (4) and (5) above were deemed to be exempt from registration under the Securities Act in reliance on Section 4(a)(2) of the Securities Act and Rule 506 promulgated under Regulation D promulgated thereunder as transactions by an issuer not involving a public offering. The recipients of securities in each of these transactions acquired the securities for investment only and not with a view to or for sale in connection with any distribution thereof and appropriate legends were affixed to the securities issued in these transactions. Each of the recipients of securities in these transactions was an accredited investor within the meaning of Rule 501 of Regulation D under the Securities Act and had adequate access, through employment, business or other relationships, to information about the Registrant. No underwriters were involved in these transactions.

The offers, sales and issuances of the securities described in paragraph (3) above were deemed to be exempt from registration under the Securities Act in reliance on Rule 701 in that the transactions were under compensatory benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of such securities were the Registrant's employees, directors or bona fide consultants and received the securities under the Registrant's 2011 Equity Incentive Plan. Appropriate legends were affixed to the securities issued in these transactions. Each of the recipients of securities in these transactions had adequate access, through employment, business or other relationships, to information about the Registrant.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits.

The list of exhibits is set forth under "Exhibit Index" at the end of this registration statement and is incorporated herein by reference.

(b) Financial Statement Schedules.

No financial statement schedules are provided because the information called for is not required or is shown either in the financial statements or the notes thereto.

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 SEC 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 of 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:

(a) 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.

(b) 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.

(c) That, for the purpose of determining liability under the Securities Act to any purchaser:

(1) If the registrant is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(d) That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities: The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(1) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(2) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(3) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(4) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

Signatures

Pursuant to the requirements of the Securities Act, the Registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Diego, State of California, on the 20th day of January 2015.

TRACON Pharmaceuticals, Inc.

/s/ CHARLES P. THEUER, M.D., PH.D.

Charles P. Theuer, M.D., Ph.D.
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
/s/ CHARLES P. THEUER, M.D., PH.D. Charles P. Theuer, M.D., Ph.D.	President, Chief Executive Officer and Member of the Board of Directors *(Principal Executive Officer)*	January 20, 2015
/s/ PATRICIA L. BITAR, CPA Patricia L. Bitar, CPA	Chief Financial Officer *(Principal Financial and Accounting Officer)*	January 20, 2015
* Kenji Harada, Ph.D.	Member of the Board of Directors	January 20, 2015
* Hironori Hozoji	Member of the Board of Directors	January 20, 2015
* William R. LaRue	Member of the Board of Directors	January 20, 2015
* Martin A. Mattingly, Pharm.D.	Member of the Board of Directors	January 20, 2015

Signature	Title	Date
*	Member of the Board of Directors	January 20, 2015
Alfred Scheidegger, Ph.D.		
*	Member of the Board of Directors	January 20, 2015
J. Rainer Twiford, J.D., Ph.D.		
*	Member of the Board of Directors	January 20, 2015
Paul Walker		

*By: /s/ CHARLES P. THEUER, M.D., PH.D.

Charles P. Theuer, M.D., Ph.D.
Attorney-in-fact

Exhibit Index

Exhibit Number	Description of Document
1.1	Form of Underwriting Agreement.
3.1^	Restated Certificate of Incorporation, as currently in effect.
3.1.1	Certificate of Amendment to Restated Certificate of Incorporation, filed January 16, 2015.
3.2	Form of Amended and Restated Certificate of Incorporation to become effective immediately prior to the closing of this offering.
3.3^	Amended and Restated Bylaws, as currently in effect.
3.4	Form of Amended and Restated Bylaws to become effective immediately prior to the closing of this offering.
4.1	Form of Common Stock Certificate of the Registrant.
4.2^	Amended and Restated Investors' Rights Agreement by and among the Registrant and certain of its stockholders, dated September 19, 2014.
5.1	Opinion of Cooley LLP.
10.1+^	Form of Indemnity Agreement by and between the Registrant and its directors and officers.
10.2+^	TRACON Pharmaceuticals, Inc. 2011 Equity Incentive Plan and Forms of Stock Option Agreement and Notice of Exercise thereunder.
10.3+	TRACON Pharmaceuticals, Inc. 2015 Equity Incentive Plan and Forms of Stock Option Grant Notice, Stock Option Agreement, Notice of Exercise and Restricted Stock Unit Agreement thereunder.
10.4+	TRACON Pharmaceuticals, Inc. Non-Employee Director Compensation Policy.
10.5+^	Amended and Restated Employment Agreement by and between the Registrant and Charles P. Theuer, M.D., Ph.D., dated May 7, 2014, as amended on September 17, 2014.
10.6+^	Employment Agreement by and between the Registrant and H Casey Logan, M.B.A., dated February 18, 2013, as amended on September 17, 2014.
10.7+^	Offer Letter by and between the Registrant and Patricia Bitar, dated September 17, 2014.
10.8+^	TRACON Pharmaceuticals, Inc. Severance Plan and Summary Plan Description.
10.9+^	Severance Agreement by and between the Registrant and Patricia Bitar, dated September 22, 2014.
10.10^	Office Lease Agreement by and between the Registrant and Glenborough Aventine, LLC, dated February 10, 2011, as amended on September 16, 2013 and September 15, 2014.
10.11*	License Agreement by and between the Registrant and Santen Pharmaceutical Co., Ltd., dated March 3, 2014, as amended.
10.12*^	License Agreement by and among the Registrant and Roswell Park Cancer Institute and Health Research, Inc., dated November 1, 2005, as amended on November 12, 2009, February 11, 2010 and September 18, 2014.
10.13*^	License Agreement by and between the Registrant and Case Western Reserve University, dated August 2, 2006.

Exhibit Number	Description of Document
10.14*^	License Agreement by and between the Registrant and Lonza Sales AG, dated June 29, 2009.
10.15^	Warrant to Purchase Stock issued to Silicon Valley Bank on November 14, 2013.
10.16^	Warrant to Purchase Stock issued to Silicon Valley Bank on June 4, 2014.
10.17^	Loan and Security Agreement by and between the Registrant and Silicon Valley Bank, dated November 14, 2013, as amended on June 4, 2014.
10.18*^	Cooperative Research and Development Agreement by and between the Registrant and the U.S. Department of Health and Human Services, as represented by National Cancer Institute, dated December 22, 2010.
10.19*^	Cooperative Research and Development Agreement by and between the Registrant and the U.S. Department of Health and Human Services, as represented by National Cancer Institute, dated January 28, 2011, as amended on March 12, 2013.
10.20*^	Cooperative Research and Development Agreement by and between the Registrant and the U.S. Department of Health and Human Services, as represented by National Cancer Institute, dated August 7, 2012.
10.21*^	Sponsored Research Agreement by and between the Registrant and Tufts Medical Center, Inc., dated December 16, 2014.
23.1	Consent of Independent Registered Public Accounting Firm.
23.2	Consent of Cooley LLP. Reference is made to Exhibit 5.1.
24.1^	Power of Attorney.

† To be filed by amendment.

^ Previously filed.

+ Indicates management contract or compensatory plan.

* Confidential treatment has been requested with respect to certain portions of this exhibit. Omitted portions have been filed separately with the SEC.

TRACON Pharmaceuticals, Inc.

[·] Shares of Common Stock

UNDERWRITING AGREEMENT

Dated: [·], 2015

Table of Contents

EXHIBITS

TRACON Pharmaceuticals, Inc.

[·] Shares of Common Stock

UNDERWRITING AGREEMENT

[·], 2015

Wells Fargo Securities, LLC
Stifel, Nicolaus & Company, Incorporated
As Representatives of the several Underwriters

c/o Wells Fargo Securities, LLC
375 Park Avenue
New York, New York 10152

c/o Stifel, Nicolaus & Company, Incorporated
One Montgomery Street, Suite 3700
San Francisco, California 94104

Ladies and Gentlemen:

TRACON Pharmaceuticals, Inc., a Delaware corporation (the "Company") confirms its agreement with Wells Fargo Securities, LLC ("Wells Fargo"), Stifel, Nicolaus & Company, Incorporated ("Stifel") and each of the other Underwriters named in Exhibit A hereto (collectively, the "Underwriters," which term shall also include any underwriter substituted as hereinafter provided in Section 10 hereof), for whom Wells Fargo and Stifel are acting as representatives (in such capacity, the "Representatives"), with respect to the issue and sale by the Company of a total of [·] shares (the "Initial Securities") of the Company's common stock, par value $0.001 per share (the "Common Stock"), and the purchase by the Underwriters, acting severally and not jointly, of the respective numbers of Initial Securities set forth in said Exhibit A hereto, and with respect to 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 to cover over-allotments, if any. 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 hereinafter called, collectively, the "Securities." Certain terms used in this Agreement are defined in Section 15 hereof.

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.

After the execution and delivery of this Agreement, the Company will prepare and file with the Commission a prospectus dated [·], 2015 in accordance with the provisions of Rule 430A and Rule 424(b). Such prospectus, in the form first furnished to the Underwriters for use in connection with the offering of the Securities (whether to meet the request of purchasers pursuant to Rule 173(d) or otherwise) is herein called the "Prospectus."

Prior to the date of this Agreement (in the case of clauses (a) and (b) below) and concurrently with (in the case of clauses (c), (d) and (e) below) the purchase of the Initial Securities by the Underwriters on the Closing Date referred to in Section 2(c):

(a) the Company shall have effected a [·]-for-one reverse stock split (the "Stock Split"),

(b) all consents, approvals, waivers and amendments, if any, necessary under any of the Stockholder Documents (as defined below) or the Company's charter or bylaws in connection with any of the Pre-Closing Transactions (as defined below) or the offering or sale of the Securities or for the Company to enter into this Agreement or to perform its obligations hereunder shall have been obtained and shall be in full force and effect (collectively, the "Consents and Waivers"),

(c) the Co-Sale Agreement and the Voting Agreement (each as defined below) shall have terminated and the covenants set forth in Sections 2.1 through 2.10 of the Investors' Rights Agreement (as defined below) shall have terminated (collectively, the "Stockholder Documents Termination"),

(d) the Company's charter and by-laws shall have been amended and restated and such amended and restated charter shall have been filed with the Secretary of State of the State of Delaware (collectively, the "Amendment and Restatement"), and

(e) all of the outstanding shares of the Company's Preferred Stock shall have been automatically converted into shares of Common Stock (the "Preferred Stock Conversion"),

all on the terms contemplated by the Pre-Pricing Prospectus and the Prospectus. The Stock Split, the Stockholder Documents Termination, the Consents and Waivers, the Amendment and Restatement and the Preferred Stock Conversion are hereinafter called, collectively, the "Pre-Closing Transactions").

The following terms, as used herein, have the respective meanings set forth below:

(a) "Co-Sale Agreement" means the Amended and Restated Right of First Refusal, Co-Sale and Drag-Along Agreement dated September 19, 2014 among the Company and the investors named therein, as amended, supplemented or restated, if applicable;

(b) "Investors' Rights Agreement" means the Amended and Restated Investors' Rights Agreement dated September 19, 2014 among the Company and the investors named therein, as amended, supplemented or restated, if applicable;

(c) "Voting Agreement" means the Amended and Restated Voting Agreement dated September 19, 2014 among the Company and the investors named therein, as amended, supplemented or restated, if applicable; and

(d) "Stockholder Documents" means, collectively, the Co-Sale Agreement, the Investors' Rights Agreement and the Voting Agreement.

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, as of the Applicable Time, as of the Closing Date referred to in Section 2(c) hereof, and as of each Option Closing Date (if any) referred to in Section 2(b) hereof, and agrees with each Underwriter, as follows:

(1) Compliance with Registration Requirements. The Securities have been duly registered under the 1933 Act pursuant to the Registration Statement. Each of the Initial Registration Statement and any post-effective amendments thereto have been declared effective under the 1933 Act and any Rule 462(b) Registration Statement has become effective under the 1933 Act or will become effective under the 1933 Act not later than 8:00 a.m. (New York City time) on the business day immediately after the date of this Agreement, and no stop order suspending the effectiveness of the Initial Registration Statement or any Rule 462(b) Registration Statement has been issued under the 1933 Act and no proceedings for that purpose have been instituted or are pending or, to the knowledge of the Company, are contemplated by the Commission, and any request on the part of the Commission for additional information has been complied with or otherwise finally resolved with the Commission.

(2) Registration Statement, Prospectus and Disclosure at Time of Sale. At the respective times that the Initial Registration Statement, any Rule 462(b) Registration Statement and any amendments to any of the foregoing were declared or became effective, as the case may be, and at the Closing Date (and, if any Option Securities are purchased, at the applicable Option Closing Date), the Initial Registration Statement, any Rule 462(b) Registration Statement and any amendments to any of

the foregoing complied and will comply in all material respects with the requirements of the 1933 Act and the 1933 Act Regulations and did not and will not contain 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.

At the respective times the Prospectus or any amendment or supplement thereto was filed pursuant to Rule 424(b) or issued, at the Closing Date (and, if any Option Securities are purchased, at the applicable Option Closing Date), and at any time when a prospectus is required (or, but for the provisions of Rule 172, would be required) by applicable law to be delivered in connection with sales of Securities (whether to meet the requests of purchasers pursuant to Rule 173(d) or otherwise), neither the Prospectus nor any amendments or supplements thereto included or will include an untrue statement of a material fact or omitted 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.

As of the Applicable Time (except in the case of clause (z) below) and as of each time prior to the Closing Date that an investor agrees (orally or in writing) to purchase or, if applicable, reconfirms (orally or in writing) an agreement to purchase any Securities from the Underwriters, neither (x) any Issuer General Use Free Writing Prospectuses, if any, issued at or prior to the Applicable Time, the Pre-Pricing Prospectus as of the Applicable Time and the information, if any, included on Exhibit D hereto, all considered together (collectively, the "General Disclosure Package"), nor (y) any individual Issuer Limited Use Free Writing Prospectus, when considered together with the General Disclosure Package, nor (z) any Issuer General Use Free Writing Prospectus issued subsequent to the Applicable Time, when considered together with the General Disclosure Package, included or will include an untrue statement of a material fact or omitted 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.

Each preliminary prospectus and the Prospectus and any amendments or supplements to any of the foregoing filed as part of the Registration Statement or any amendment thereto, or filed pursuant to Rule 424 under the 1933 Act, or delivered to the Underwriters for use in connection with the offering of the Securities, complied when so filed or when so delivered, as the case may be, in all material respects with the 1933 Act and the 1933 Act Regulations.

The representations and warranties in the preceding paragraphs of this Section 1(a)(2) do not apply to statements in or omissions from the Registration Statement, any preliminary prospectus, the General Disclosure Package, the Prospectus or any Issuer Free Writing Prospectus or any amendment or supplement to any of the foregoing made in reliance upon and in conformity with written information furnished to the Company by any Underwriter through the Representatives expressly for use therein, it being understood and agreed that the only such information furnished by the Underwriters as aforesaid consists of the information described as such in Section 6(b) hereof.

At the respective times that the Initial Registration Statement, any Rule 462(b) Registration Statement or any amendment to any of the foregoing were filed, and at the date hereof, the Company was not and is not an "ineligible issuer" as defined in Rule 405, in each case without taking into account any determination made by the Commission pursuant to paragraph (2) of the definition of such term in Rule 405; and, without limitation to the foregoing, the Company has at all relevant times met, meets and will at all relevant times meet the requirements of Rule 164 for the use of a free writing prospectus (as defined in Rule 405) in connection with the offering contemplated hereby.

The copies of the Initial Registration Statement and any Rule 462(b) Registration Statement and any amendments to any of the foregoing and the copies of each preliminary prospectus, each Issuer Free Writing Prospectus that is required to be filed with the Commission pursuant to Rule 433 and the Prospectus and any amendments or supplements to any of the foregoing that have been or subsequently are delivered to the Underwriters in connection with the offering of the Securities (whether to meet the request of purchasers pursuant to Rule 173(d) or otherwise) were and 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. For purposes of this Agreement, references to the "delivery" or "furnishing" of any of

the foregoing documents to the Underwriters, and any similar terms, include, without limitation, electronic delivery.

The Company has made available a "bona fide electronic road show" (as defined in Rule 433(h)) in compliance with Rule 433(d)(8)(ii) such that no filing with the Commission of any "road show" (as defined in Rule 433(h)) is required in connection with the offering of the Securities.

Each Issuer Free Writing Prospectus (if any), as of its issue date and at all subsequent times through the completion of the public offering and sale of the Securities, did not, does not and will not include any information that conflicted, conflicts or will conflict with the information contained in the Registration Statement, any preliminary prospectus or the Prospectus that has not been superseded or modified.

(3) Pre-Closing Transactions. The Pre-Closing Transactions have been or will be consummated, as the case may be, on or prior to the respective times contemplated by this Agreement (or such earlier times as may be contemplated by the Pre-Pricing Prospectus or the Prospectus) on the terms contemplated by this Agreement, the Pre-Pricing Prospectus and the Prospectus, and the Consents and Waivers are in full force and effect.

(4) Independent Accountants. The accountants who certified the financial statements and any supporting schedules included in the Registration Statement, the General Disclosure Package and the Prospectus are independent public accountants as required by the 1933 Act, the 1933 Act Regulations and the PCAOB.

(5) Financial Statements. The financial statements of the Company included in the Registration Statement, the General Disclosure Package and the Prospectus, together with the related schedules (if any) and notes, present fairly the financial position of the Company at the dates indicated and the results of operations, changes in stockholders' equity and cash flows of the Company for the periods specified; and all such financial statements have been prepared in conformity with GAAP applied on a consistent basis throughout the periods involved and comply with all applicable accounting requirements under the 1933 Act and the 1933 Act Regulations. The supporting schedules, if any, included in the Registration Statement present fairly, in accordance with GAAP, the information required to be stated therein. The information in the Pre-Pricing Prospectus and the Prospectus under the captions "Summary Financial Data" and "Selected Financial Data" presents fairly the information shown therein and has been compiled on a basis consistent with that of the audited financial statements of the Company included in the Registration Statement, the General Disclosure Package and the Prospectus. The pro forma information appearing in the Pre-Pricing Prospectus and the Prospectus under the captions "Summary Financial Data" and "Selected Financial Data" presents fairly the information shown therein.

(6) No Material Adverse Change in Business. Since the respective dates as of which information is given in the Registration Statement, the General Disclosure Package and the Prospectus, except as otherwise stated therein (in each case exclusive of any amendments or supplements thereto subsequent to the date of this Agreement), (A) there has been no material adverse change or any development that could reasonably be expected to result in a material adverse change in the condition (financial or other), results of operations, business, properties, management or prospects of the Company taken as a whole, whether or not arising in the ordinary course of business (in any such case, a "Material Adverse Effect"); (B) the Company has not incurred any liability or obligation or entered into any transaction or agreement that, individually or in the aggregate, is material with respect to the Company, taken as a whole, and the Company has not sustained any loss or interference with its business or operations from fire, explosion, flood, earthquake or other natural disaster or calamity, whether or not covered by insurance, or from any labor dispute or disturbance or court or governmental action, order or decree, except as would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect; 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.

(7) Good Standing of the Company. The Company has been duly organized and is validly existing as a corporation in good standing under the laws of the State of Delaware and has power and authority to own, lease and operate its properties and to conduct its business as currently conducted and 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 the State of California and 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 (solely in the case of jurisdictions other than the State of California) where the failure so to qualify or to be in good standing would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect.

(8) Subsidiaries. The Company has no subsidiaries (as defined in Rule 405).

(9) Capitalization. The authorized, issued and outstanding Capital Stock of the Company as of the date of this Agreement is as set forth in the column entitled "Actual" and in the corresponding line items under the caption "Capitalization" in the Pre-Pricing Prospectus and the Prospectus and, at the time of the purchase of the Initial Securities by the Underwriters on the Closing Date and as of each Option Closing Date (if any), the authorized, issued and outstanding Capital Stock of the Company will be as set forth in the columns entitled "Pro Forma" and "Pro Forma As Adjusted" and in the corresponding line items under such captions (in each case except for any Option Securities issued by the Company pursuant to this Agreement and issuances, if any, subsequent to the date of this Agreement pursuant to employee or director stock option, stock purchase or other equity incentive plans described in the Pre-Pricing Prospectus and the Prospectus or pursuant to the exercise of options, warrants or convertible securities described in the General Disclosure Package and the Prospectus. The shares of issued and outstanding Capital Stock of the Company have been duly authorized and validly issued and are fully paid and non-assessable and were issued in compliance in all material respects with all applicable state and federal securities and "blue-sky" laws; and none of the outstanding shares of Capital Stock of the Company was issued in violation of any preemptive rights, rights of first refusal or other similar rights of any securityholder of the Company or, to the knowledge of the Company, any other person.

(10) Authorization of Agreement. This Agreement has been duly authorized, executed and delivered by the Company.

(11) Authorization of Securities. The Securities to be sold by the Company under this Agreement 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, fully paid and non-assessable; to the knowledge of the Company, no holder of the Securities is or will be subject to personal liability by reason of being such a holder; and the issuance and sale of the Securities by the Company under

this Agreement are not subject to any preemptive rights, rights of first refusal or other similar rights of any securityholder of the Company or, to the knowledge of the Company, any other person.

(12) Description of Securities. The Common Stock, Convertible Preferred Stock and the authorized but unissued Preferred Stock, all classes or series of Preferred Stock outstanding on the date of this Agreement, all outstanding warrants and convertible securities, and the Company's charter and bylaws conform in all material respects to the respective statements relating thereto contained in the Registration Statement, the General Disclosure Package and the Prospectus and such statements conform in all material respects to the rights set forth in the respective instruments and agreements defining the same.

(13) Absence of Defaults and Conflicts. The Company is not in violation of its Organizational Documents or in default in the performance or observance of any obligation, agreement, covenant or condition contained in any Company Document, except for such defaults that would not, individually 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 in the Pre-Pricing Prospectus and the Prospectus under the caption "Use of Proceeds") and compliance by the Company with its obligations under this Agreement 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, Termination Event or Repayment Event under, or result in the creation or imposition of any Lien upon any property or assets of the Company pursuant to, any Company Documents, except for such conflicts, breaches, defaults or Liens that would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect, nor will such action result in any violation of (i) the provisions of the Organizational Documents of the Company or (ii) any applicable law, statute, rule, regulation, judgment, order, writ or decree of any government, government instrumentality or court, domestic or foreign, having jurisdiction over the Company or any of their respective assets, properties or operations, except in the case of clause (ii) only, for any such violation that would not reasonably be expected to result in a Material Adverse Effect or materially and adversely affect the consummation of the transactions contemplated in this Agreement or the performance by the Company of its obligations under this Agreement.

(14) Absence of Labor Dispute. No labor dispute with the employees of the Company 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 the principal suppliers, manufacturers, customers or contractors of the Company which would reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect.

(15) Absence of Proceedings. There is no action, suit, proceeding, inquiry or investigation before or brought by any court or governmental agency or body, domestic or foreign, now pending, or, to the knowledge of the Company, threatened, against or affecting the Company which is required to be disclosed in the Registration Statement, the Pre-Pricing Prospectus or the Prospectus (other than as disclosed therein), or which would reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect or that would reasonably be expected to materially and adversely affect the consummation of the transactions contemplated in this Agreement or the performance by the Company of its obligations under this Agreement.

(16) Accuracy of Descriptions and Exhibits. The information in the Pre-Pricing Prospectus and the Prospectus under the captions "Management's Discussion and Analysis of Financial Condition and Results of Operations–Liquidity and Capital Resources," "Business–Intellectual Property," "Business–Governmental Regulation," "Business–Legal Proceedings," "Description of Capital Stock," and "Shares Eligible for Future Sale," and the information in the Registration Statement under Items 14 and 15, in each case to the extent that it constitutes matters of law, summaries of legal matters, summaries of provisions of the Company's charter or bylaws or any other instruments or agreements, summaries of legal proceedings, or legal conclusions, is an accurate summary of such legal matters, documents, instruments, agreements, proceedings or conclusions, as the case may be, in all material respects; and there are no franchises, contracts, indentures, mortgages, deeds of trust, loan or credit agreements, bonds, notes, debentures, evidences of indebtedness, leases or other instruments, agreements or documents required to be described or referred to in the Registration Statement, the Pre-Pricing Prospectus or the Prospectus or to be filed as exhibits to the Registration Statement which have not been so described and filed as required.

(17) Possession of Intellectual Property. The Company owns and possesses or has valid and enforceable licenses to use, all patents, patent rights, patent applications, licenses, copyrights, inventions, know-how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures), trade marks, service marks, trade names, service names, software, internet addresses, domain names and other intellectual property (collectively, "Intellectual Property") that is described in the Registration Statement, the General Disclosure Package or the Prospectus or that is necessary for the conduct of its business as currently conducted, as proposed to be conducted and as described in the Registration Statement, the General Disclosure Package and the Prospectus, except where the failure to own, possess or license such rights would not, individually or in

the aggregate, reasonably be expected to result in a Material Adverse Effect; and the Company has not received any notice or is otherwise aware of any infringement of or conflict with rights of others with respect to any Intellectual Property or of any facts or circumstances which would reasonably be expected to render any Intellectual Property invalid or inadequate to protect the interests of the Company therein; there are no third parties who have or, to the knowledge of the Company, will be able to establish rights to any Intellectual Property of the Company, except for, and to the extent of, the ownership rights of the owners of the Intellectual Property which the Registration Statement, the General Disclosure Package and the Prospectus disclose is licensed to the Company; there is no pending or, to the knowledge of the Company, threatened action, suit, proceeding or claim by others challenging the Company's rights in or to any such Intellectual Property, or challenging the validity, enforceability or scope of any such Intellectual Property, or asserting that the Company infringes or otherwise violates, or would, upon the commercialization of any product or service described in the Registration Statement, the General Disclosure Package or the Prospectus, infringe or violate, any Intellectual Property of others, and the Company is unaware of any facts which could form a reasonable basis for any such action, suit, proceeding or claim; the Company has complied with the terms of each agreement pursuant to which any Intellectual Property has been licensed to the Company, all such agreements are in full force and effect, and no event or condition has occurred or exists that gives or, with notice or passage of time or both, would give any person the right to terminate any such agreement; and to the knowledge of the Company, there is no patent or patent application that contains claims that interfere with

the issued or pending claims of any such Intellectual Property of the Company or any patent, patent application, or publication that challenges the validity, enforceability or scope of any such Intellectual Property.

(18) Absence of Further Requirements. (A) No filing with, or authorization, approval, consent, license, order, registration, qualification or decree of, any court or governmental authority or agency, domestic or foreign, (B) no authorization, approval, vote or consent of any holder of Capital Stock or other securities of the Company or creditor of the Company, (C) no authorization, approval, waiver or consent under any Company Document, and (D) no authorization, approval, vote or consent of any other person or entity, is necessary or required for the execution, delivery or performance by the Company of its obligations under this Agreement, for the offering of the Securities as contemplated by this Agreement, for the issuance, sale or delivery of the Securities hereunder, or for the consummation of any of the other transactions contemplated by this Agreement, in each case on the terms contemplated by the Registration Statement, the General Disclosure Package and the Prospectus, except such as have been obtained under the 1933 Act or the 1933 Act Regulations and except that no representation is made as to such as may be required under state or foreign securities laws.

(19) Possession of Licenses and Permits. The Company possesses such permits, licenses, approvals, consents and other authorizations (collectively, "Governmental Licenses") issued by the appropriate federal, state, local or foreign regulatory agencies or bodies necessary to conduct the business now operated by them; and, except where the failure to be in compliance with any of the foregoing would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect, the Company is in compliance with the terms and conditions of all such Governmental Licenses, all such Governmental Licenses are valid and in full force and effect and the Company has not received any notice of proceedings relating to the revocation or modification of any such Governmental Licenses.

(20) Title to Property. The Company has good and marketable title in fee simple to all real property owned by it (if any) and good title to all other properties and assets owned by it, in each case, free and clear of all Liens except such as (a) are described in the Registration Statement, the General Disclosure Package and the Prospectus or (b) are not, individually or in the aggregate, material to the Company taken as a whole, are not required to be disclosed in the Registration Statement, the Pre-Pricing Prospectus or the Prospectus and do not, individually or in the aggregate, materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company; all real property, buildings and other improvements, and all equipment and other property, held under lease or sublease by the Company is held by them under valid, subsisting and enforceable leases or subleases, as the case may be, with, solely in the case of leases or subleases relating to real property, buildings or other improvements, such exceptions as are not material and do

not materially interfere with the use made or proposed to be made of such property and buildings or other improvements by the Company, and all such leases and subleases are in full force and effect; and the Company has not received any notice of any claim of any sort that has been asserted by anyone adverse to the rights of the Company under any of the leases or subleases mentioned above or affecting or questioning the rights of the Company to the continued possession of the leased or subleased premises under any such lease or sublease, except for such claims which, if successfully asserted against the Company, would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect.

(21) Investment Company Act. The Company is not, and upon the issuance and sale of the Securities as herein contemplated and the issuance and sale of Common Stock in the concurrent private placement to New Enterprise Associates 14, L.P. ("NEA") as described in the General Disclosure Package and the Prospectus (the "Concurrent Private Placement") and the application of the net proceeds therefrom as described in the General Disclosure Package and the Prospectus under the caption "Use Of Proceeds," will not be, an "investment company" or an entity "controlled" by an "investment company" as such terms are defined in the 1940 Act.

(22) Environmental Laws. Except as described in the Registration Statement, the General Disclosure Package and the Prospectus or except as would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect, (A) the Company is not in violation of any 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 chemicals, pollutants, contaminants, wastes, toxic substances, hazardous substances, petroleum or petroleum products (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 has all permits, authorizations and approvals required under any applicable Environmental Laws and are each in compliance with their requirements, (C) there are no pending or, to the knowledge of the Company, threatened administrative, regulatory or judicial actions, suits, demands, demand letters, claims, liens, notices of noncompliance or violation, investigation or proceedings relating to any Environmental Law against the Company and (D) there are no events or circumstances that might 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 body or agency, against or affecting the Company relating to Hazardous Materials or any Environmental Laws.

(23) Absence of Registration Rights. There are no persons with registration rights or other similar rights to have any securities (debt or equity) (A) registered pursuant to the Registration Statement or included in the offering contemplated by this Agreement or (B) except as otherwise disclosed in the General Disclosure Package and the Prospectus, otherwise registered by the Company under the 1933 Act, and there are no persons with co-sale rights, tag-along rights or other similar rights to have any securities (debt or equity) included in the offering contemplated by this Agreement or sold in connection with the sale of Securities, except in each case for such rights that have been duly waived in writing; and the Company has given all notices required by, and has otherwise complied with its obligations under, all registration rights agreements, co-sale agreements, tag-along agreements and other similar agreements (including, without limitation, the Stockholder Documents) in connection with the transactions contemplated by this Agreement.

(24) Parties to Lock-Up Agreements. Each executive officer and director and substantially all of the securityholders of the Company have executed and delivered to the Representatives a lock-up agreement substantially in the form of Exhibit C hereto. All stock options that may be issued by the Company at any time during the Lock-Up Period will provide, in each case pursuant to written stock option agreements or similar agreements executed and delivered by the holders of such stock options, that the holders of such stock options will not effect any public sale or distribution (including sales

pursuant to Rule 144 under the 1933 Act) of any Common Stock, or any securities convertible into or exchangeable or exercisable for Common Stock, during the Lock-Up Period; and, during the Lock-Up Period, the Company will not cause or permit any waiver, release, modification or amendment of any such restriction on transfer without the prior written consent of the Representatives.

(25) Nasdaq. The Securities being sold hereunder by the Company have been approved for listing, subject only to official notice of issuance, on the Nasdaq Global Market.

(26) FINRA Matters. All of the information provided to the Representatives or to counsel for the Underwriters in connection with any letters, filings or other supplemental information provided to FINRA pursuant to FINRA Rule 5110 or 5121 is true, complete and correct.

(27) Tax Returns. The Company has filed all foreign, federal, state and local tax returns that are required to be filed or have obtained extensions thereof, except where the failure so to file would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect, and has paid all taxes (including, without limitation, any estimated taxes) required to be paid and any other assessment, fine or penalty, to the extent that any of the foregoing is due and payable, except for any such tax, assessment, fine or penalty that is currently being contested in good faith by appropriate actions and except for such taxes, assessments, fines or penalties the nonpayment of which would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect.

(28) Insurance. The Company is insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as are prudent and customary in the businesses in which they are engaged; all policies of insurance and any fidelity or surety bonds insuring the Company or its businesses, assets, employees, officers and directors are in full force and effect in all material respects; and the Company and is in compliance with the terms of such policies and instruments in all material respects; there are no claims by the Company under any such policy or instrument as to which any insurance company is denying liability or defending under a reservation of rights clause; the Company has not been refused any insurance coverage sought or applied for; and the Company does not have any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers at a cost that would not, individually or in the aggregate, result in a Material Adverse Effect.

(29) Accounting and Disclosure Controls. The Company maintains and has taken all actions reasonably necessary to ensure that, within the time period required by applicable law, the Company will have established and will maintain effective “internal control over financial reporting” (as defined in Rule 13a-15 of the 1934 Act Regulations). The Company maintains a system of internal accounting controls sufficient to provide reasonable assurance that (A) transactions are executed in accordance with management’s general or specific authorizations; (B) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability; (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 first day of the Company’s earliest fiscal year for which audited financial statements are included in the Registration Statement, the General Disclosure Package and the Prospectus , there has been (1) no material weakness (as defined in Rule 1-02 of Regulation S-X of the Commission) in the Company’s internal control over financial reporting (whether or not remediated), and (2) no fraud, whether or not material, involving management or other employees who have a role in the Company’s internal control over financial reporting and, since the end of the Company’s earliest fiscal year for which audited financial statements are included in the Registration Statement, the General Disclosure Package and the Prospectus, there has been no change in the Company’s internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, in a negative manner the Company’s internal control over financial reporting. The Company has established, maintained and periodically evaluates the effectiveness of “disclosure controls and procedures” (as defined in Rules 13a-15 and 15d-15 under the 1934 Act); such disclosure controls and procedures are designed to ensure that information

required to be disclosed by the Company in the reports that it will be required to file or submit under the 1934 Act is recorded, processed, summarized and reported, within the time periods specified in the Commission’s rules and forms, and is accumulated and communicated to the Company’s management, including its principal executive officer or officers and principal financial officer or officers, as appropriate, to allow timely decisions regarding disclosure.

(29) Internal Controls. The Company’s independent public accountants and the audit committee of the Company’s board of directors have been advised of all material weaknesses, if any, and significant deficiencies (as defined in Rule 1-02 of Regulation S-X of the Commission), if any, in the Company’s internal control over financial reporting and of all fraud, if any, whether or not material, involving management or other employees who have a role in the Company’s internal control over financial reporting, in each case that occurred or existed, or was first detected, at any time during the two most recent fiscal years covered by the Company’s audited financial statements included in the Registration Statement, the General Disclosure Package and the Prospectus or at any time subsequent thereto.

(30) Compliance with the Sarbanes-Oxley Act. There is and has been no failure on the part of the Company or any of the Company’s directors or officers, in their capacities as such, to comply with any provision of the Sarbanes-Oxley Act with which any of them is required to comply, including Section 402 of the Sarbanes-Oxley Act related to loans.

(31) Pending Proceedings and Examinations; Comment Letters. The Registration Statement is not the subject of a pending proceeding or examination under Section 8(d) or 8(e) of the 1933 Act, and the Company is not the subject of a pending proceeding under Section 8A of the 1933 Act. The Company has provided the Representatives with true, complete and correct copies of any written comments received from the Commission by the Company or its legal counsel or accountants, and of any transcripts made by the Company, its legal counsel or accountants of any oral comments received from the Commission, with respect to the Registration Statement, any preliminary prospectus, the Prospectus, any Issuer Free Writing Prospectus or any amendments or supplements to any of the foregoing and of all written responses thereto, and no such comments remain unresolved.

(32) Absence of Manipulation. The Company has not taken and will not take, directly or indirectly, any action designed to or that would constitute or that might reasonably be expected to cause or result in the stabilization or manipulation of the price of any security to facilitate the sale or resale of the Securities; provided, however, that the Company makes no such representation or warranty with respect to the actions of any Underwriter or affiliate or agent of any Underwriter.

(33) Statistical, Clinical and Market-Related Data. Any statistical, clinical, medical, therapeutic, demographic or market-related and similar data included in the Registration Statement, the General Disclosure Package or the Prospectus are based on or derived from sources that the Company

believes to be reliable and accurate and accurately reflect the materials upon which such data is based or from which it was derived, and the Company has delivered or made available, true, complete and correct copies of such materials to the Representatives, which copies are, to its knowledge, true, complete and correct.

(34) Foreign Corrupt Practices Act. The Company, and to the knowledge of the Company, any director, officer, agent, employee, affiliate or other person acting on behalf of the Company are not aware of or has taken any action, directly or indirectly, that has resulted or would result in a violation by any such person of the FCPA, including, without limitation, any 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 other 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 ensure, continued compliance therewith.

(35) Money Laundering Laws. The operations of the Company 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 applicable jurisdictions, the rules and regulations thereunder and any related or similar applicable rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, "Money Laundering Laws") and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(36) OFAC. The Company and, to the knowledge of the Company, any director, officer, agent, employee, affiliate or other person acting on behalf of the Company are not currently subject to any U.S. sanctions administered by OFAC; and the Company will not directly or indirectly use any of the proceeds from the sale of Securities in the offering contemplated by this Agreement, or lend, contribute or otherwise make available any such proceeds to any subsidiary, joint venture partner or other person or entity, for the purpose of financing the activities of any person currently subject to any U.S. sanctions administered by OFAC.

(37) ERISA Compliance. Except as would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect, none of the following events has occurred or exists: (i) a failure to fulfill the obligations, if any, under the minimum funding standards of Section 302 of ERISA with respect to a Plan (as defined below) determined without regard to any waiver of such obligations or extension of any amortization period; (ii) an audit or investigation by the Internal Revenue Service, the U.S. Department of Labor, the Pension Benefit Guaranty Corporation or any other federal, state or foreign governmental or regulatory agency with respect to the employment or compensation of employees by the Company ; or (iii) any breach of any contractual obligation, or any violation of law or applicable qualification standards, with respect to the employment or compensation of employees by the Company. None of the following events has occurred or is reasonably likely to occur: (i) a material increase in the aggregate amount of contributions required to be made to all Plans in the current fiscal year of the Company compared to the amount of such contributions made in the Company's most recently completed fiscal year; (ii) a material increase in the "accumulated post-retirement benefit obligations" (within the meaning of Statement of Financial Accounting Standards 106) of the Company compared to the amount of such obligations in the Company's most recently completed fiscal year; (iii) any event or condition giving rise to a liability under Title IV of ERISA that would reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect; or (iv) the filing of a claim by one or more employees or former employees of the Company related to their employment that would reasonably be expected, individually or in the aggregate, to result in a Material Adverse Effect. For purposes of this paragraph and the definition of ERISA, the term "Plan" means a plan (within the meaning of Section 3(3) of ERISA) with respect to which the Company may have any liability.

(38) Lending and Other Relationship. Except as disclosed in the Registration Statement, the General Disclosure Package and the Prospectus, (i) the Company does not have any lending or similar relationship with any Underwriter or any bank or other lending institution affiliated with any Underwriter; (ii) the Company will not, directly or indirectly, use any of the proceeds from the sale of the Securities by the Company hereunder to reduce or retire the balance of any loan or credit facility extended by any Underwriter or any of its "affiliates" or "associated persons" (as such terms are used in FINRA Rule 5121) or otherwise direct any such proceeds to any Underwriter or any of its "affiliates" or "associated persons" (as so defined); and (iii) there are and have been no transactions, arrangements or dealings between the Company, on one hand, and any Underwriter or any of its "affiliates" or "associated persons" (as so defined), on the other hand, that, under FINRA Rule 5110 or 5121, must be disclosed in a submission to FINRA in connection with the offering of the Securities contemplated by this Agreement or disclosed in the Registration Statement, the General Disclosure Package or Prospectus.

(39) Changes in Management. Except as disclosed in the Registration Statement, the General Disclosure Package and the Prospectus, none of the persons who were officers or directors of the Company as of the date of the Pre-Pricing Prospectus has given oral or written notice to the Company of

his or her resignation (or otherwise indicated to the Company an intention to resign within the next 12 months), nor has any such officer or director been terminated by the Company or otherwise removed from his or her office or from the board of directors, as the case may be (including, without limitation, any such termination or removal which is to be effective as of a future date) nor is any such termination or removal under consideration by the Company or its board of directors.

(40) Transfer Taxes. There are no stock or other transfer taxes, stamp duties, capital duties or other similar duties, taxes or charges payable in connection with the execution or delivery of this Agreement by the Company or the issuance or sale by the Company of the Securities to be sold by the Company to the Underwriters hereunder.

(41) Related Party Transactions. There are no business relationships or related party transactions involving the Company or, to the knowledge of the Company, any other person that are required to be described in the Pre-Pricing Prospectus or the Prospectus that have not been described as required.

(42) Stop Transfer Instructions. The Company has, with respect to all Common Stock (other than the Securities to be sold pursuant to this Agreement) and other Capital Stock and all securities convertible into or exercisable or exchangeable for Common Stock or other Capital Stock, instructed the transfer agent or other registrar to enter stop transfer instructions and implement stop transfer procedures with respect to such securities during the Lock-Up Period; and, during the Lock-Up Period, the Company will not cause or permit any waiver, release, modification or amendment of

any such stop transfer instructions or stop transfer procedures, other than transfers permissible pursuant to the terms of the applicable lock-up agreements, without the prior written consent of the Representatives.

(43) Offering Materials. Without limitation to the provisions of Section 16 hereof, the Company has not distributed and will not distribute, directly or indirectly (other than through the Underwriters), any "written communication" (as defined Rule 405 under the 1933 Act) or other offering materials in connection with the offering or sale of the Securities, other than the Pre-Pricing Prospectus, the Prospectus, any amendment or supplements to any of the foregoing that are filed with the SEC and any Permitted Free Writing Prospectuses (as defined in Section 16).

(44) No Restrictions on Dividends. The Company is not a party to or otherwise bound by any instrument or agreement that limits or prohibits or could limit or prohibit, directly or indirectly, the Company from paying any dividends or making other distributions on its Capital Stock, except as described in the Registration Statement, the General Disclosure Package and the Prospectus.

(45) Brokers and Financial Advisors. Other than the fee payable by the Company to MTS Health Partners, L.P. for financial advisory services, there is not a broker, finder or other party that is entitled to receive from the Company any brokerage or finder's fee or other fee or commission as a result of any of the transactions contemplated by this Agreement, except for underwriting discounts and commissions payable to the Underwriters in connection with the sale of the Securities to the Underwriters pursuant to this Agreement.

(46) Clinical Data and Regulatory Compliance. The preclinical tests and clinical trials, and other studies (collectively, "Studies") that are described in, or the results of which are referred to in, the Registration Statement, the General Disclosure Package or the Prospectus were and, if still pending, are being conducted in all material respects in accordance with the protocols, procedures and controls designed and approved for such Studies and all applicable local, state, and federal laws, rules, and regulations, including, without limitation, the Federal Food, Drug, and Cosmetic Act (the "FFDCA") and the U.S. Food and Drug Administration's (the "FDA's") implementing regulations at 21 C.F.R. Parts 50, 54, 56, 58, and 312; each description of the results of such studies is accurate and complete in all material respects and fairly presents the data derived from such studies, and the Company has no knowledge of any other studies the results of which are inconsistent with, or otherwise call into question, the results described or referred to in the Registration Statement, the General Disclosure Package or the Prospectus; the Company has made all such filings and obtained all such approvals as

may be required by the FDA or any committee thereof or from any other U.S. or foreign government or drug regulatory agency, or health care facility Institutional Review Board, Ethics Committee, or similar clinical trial oversight body (collectively, the "Regulatory Agencies"); and no investigational new drug application filed by or on behalf of the Company with the FDA has been terminated or suspended, and the Company has not received any notice of, or correspondence from, any Regulatory Agency requiring, and to the knowledge of the Company, no Regulatory Agency has threatened to initiate, the termination, suspension or material modification of any clinical trials that are described or referred to in the Registration Statement, the General Disclosure Package or the Prospectus.

(47) Compliance with Health Care Laws. The Company has not received any notice of adverse filing, warning letter, untitled letter or other correspondence or notice from the FDA, or any other court or arbitrator or federal, state, local or foreign governmental or regulatory authority, alleging or asserting noncompliance with the FFDCA, the FDA's implementing regulations, or similar local, state, or foreign laws or regulations. Except as would not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect, the Company is and has been in compliance with applicable health care laws, including without limitation, the FFDCA, and the federal Anti-Kickback Statute (42 U.S.C. § 1320a-7b(b)) the civil False Claims Act (31 U.S.C. §§ 3729(a) et seq.), the administrative False Claims Law (42 U.S.C. § 1320a-7b(a)), the Civil Monetary Penalty Laws (42 U.S.C. § 1320a-7a), the Health Insurance Portability and Accountability Act of 1996 (42 U.S.C. § 1320d et seq.), as amended by the Health Information Technology for Economic and Clinical Health Act of 2009, the exclusion laws (42 U.S.C. § 1320a-7), Medicare (Title XVIII of the Social Security Act), Medicaid (Title XIX of the Social Security Act), and the regulations promulgated pursuant to such laws, and comparable state laws, and all other local, state, federal, national, supranational and foreign laws relating to the regulation of the Company (collectively, "Health Care Laws"). The Company is not a party to and does not have any ongoing reporting obligations pursuant to any corporate integrity agreement, deferred prosecution agreement, monitoring agreement, consent decree, settlement order, plan of correction or similar agreement imposed by any U.S. or non-U.S. federal, state, local or other governmental or regulatory authority, governmental or regulatory agency or body, court, arbitrator or self-regulatory organization (each, a "Governmental Authority"). Neither the Company, nor any of its directors, officers, nor to the Company's knowledge, any of its employees and agents is debarred, suspended or excluded, or has been convicted of any crime or engaged in any conduct that could reasonably be expected to result in a debarment, suspension or exclusion, from any federal or state government health care program.

(48) Authorizations. The Company possesses all material licenses, certificates, approvals, clearances, authorizations, permits and supplements or amendments thereto required by any Health Care Laws and/or to carry on its businesses as now or proposed to be conducted ("Authorizations") and such Authorizations are valid and in full force and effect and the Company is not in violation of any term of any such Authorizations. The Company has not received notice of any ongoing claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any Governmental Authority or third party alleging that any product operation or activity is in violation of any Health Care Laws or Authorizations or has any knowledge that any such Governmental Authority or third party is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding. The Company has not received notice that any Governmental Authority has taken, is taking or intends to take action to limit, suspend, modify or revoke any Authorizations or has any knowledge that any such Governmental Authority is considering such action. The Company has filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Health Care Laws or Authorizations and all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were complete, correct and not misleading on the date filed (or were corrected or supplemented by a subsequent submission) in all material respects.

(49) Emerging Growth Company Status. From the time of initial confidential submission of the Registration Statement to the Commission (or, if earlier, the first date on which the Company engaged in any written or oral communications in reliance on Section 5(d) of the 1933 Act) 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").

(50) Testing-the-Waters. The Company (a) has not alone engaged in communications with potential investors in reliance on Section 5(d) of the 1933 Act other than communications with the consent of the Representatives with entities that 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 Underwriters to engage in such communications. The Company reconfirms that the Underwriters have been authorized to act on its behalf in communicating with potential investors in reliance on Section 5(d) of the 1933 Act. The Company has not distributed any written materials relating to the Securities that would, but for the provisions of Section 5(d) of the 1933 Act, be a "free writing prospectus" as defined in Rule 405 under the 1933 Act but without regard to whether a registration statement has been filed (a "Testing-the-Waters Writing"). As of the Applicable Time, no individual Testing-the-Waters Writing distributed by or with the consent of the Company, when considered together with the General Disclosure Package, included an untrue statement of a material fact or omitted 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 Company has filed publicly on EDGAR at least 21 calendar days prior to any "road show" (as defined in Rule 433), any confidentially submitted registration statement and registration statement amendments relating to the offer and sale of the Securities.

(51) Private Placement; No Integration. The Concurrent Private Placement is exempt from the registration requirements of the 1933 Act and securities laws of any state having jurisdiction with respect thereto, and the Company has neither taken nor will take any action that would cause the loss of such exemption. The Concurrent Private Placement will not be integrated with the offering contemplated hereby for purposes of the 1933 Act or pursuant to the 1933 Act Regulations.

(b) *Certificates.* Any certificate signed by any officer of the Company (whether signed on behalf of such officer or the Company) and delivered to the Representatives or to counsel for the Underwriters shall be deemed a representation and warranty by the Company 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 the Underwriters, severally and not jointly, the Initial Securities, and each Underwriter, severally and not jointly, agrees to purchase the respective number of Initial Securities set forth opposite its name in Exhibit A hereto plus any additional number of Initial Securities which such Underwriter may become obligated to purchase pursuant to the provisions of Section 10 hereof, subject to such adjustments among the Underwriters as the Representatives in their sole discretion shall make to eliminate any sales or purchases of fractional Securities, in each case at a price of $[•] per share (the "Purchase Price").

(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 grants an option to the Underwriters, severally and not jointly, to purchase up to [•] Option Securities at a price per share equal to the Purchase Price referred to in Section 2(a) above; provided that the price per share for any Option Securities shall be reduced by an amount per share equal to any dividends or distributions declared, paid or payable by the Company on the Initial Securities but not payable on such Option Securities. The option hereby granted will expire at 11:59 P.M. (New York City time) on the 30th day after the date hereof and may be exercised in whole or in part from time to time only for the purpose of covering over-allotments which may be made in connection with the offering and distribution of the Initial Securities upon written 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 (an "Option Closing Date") shall be determined by the Representatives, but shall not be later than seven full business days after the exercise of said option (unless postponed in accordance with the provisions of Section 10), nor in any event prior to the Closing Date nor, unless the Representatives and the Company otherwise agree in writing or such Option Closing Date is on the Closing

Date, earlier than two business days after the exercise of such option. If the option is exercised as to all or any portion of the Option Securities, the Company will sell to the Underwriters the number of Option Securities then being purchased, and 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 Exhibit 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, bears to the total number of Initial Securities, subject in each case to such adjustments as the Representatives in their discretion shall make to eliminate any sales or purchases of fractional shares.

(c) *Payment.* Payment of the purchase price for, and delivery of, the Initial Securities shall be made at the offices of Latham & Watkins LLP, 12670 High Bluff Drive, San Diego, California 92130, 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 [•] (unless postponed in accordance with the provisions of Section 10), or such other time not later than five 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 Date").

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, such Option Securities shall be made at the above-mentioned offices at 9:00 A.M. (New York City time), or at such other place as shall be agreed upon by the Representatives and the Company, on each Option Closing Date as specified in the notice from the Representatives to the Company.

Payment shall be made to the Company by wire transfer of immediately available funds to a single bank account designated by the Company, in each case against delivery to the Representatives for the respective accounts of the Underwriters of 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. Wells Fargo, individually and not as a 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 Date or the relevant Option Closing Date, as the case may be, but such payment shall not relieve such Underwriter from its obligations hereunder.

(d) *Delivery of Securities.* Delivery of the Initial Securities and any Option Securities shall be made through the facilities of DTC unless the Representatives shall otherwise instruct.

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) hereof, will comply with the requirements of Rule 430A and Rule 433 and will promptly notify the Representatives, and confirm the notice in writing, (i) when the Initial

Registration Statement, any Rule 462(b) Registration Statement or any post-effective amendment to the Registration Statement shall be declared or become effective, or when any preliminary prospectus, the Prospectus or any Issuer Free Writing Prospectus or any amendment or supplement to any of the foregoing shall have been filed, (ii) of the receipt of any comments from the Commission relating to the Registration Statement, any Rule 462(b) Registration Statement or any post-effective amendment to the Registration Statement (and shall promptly furnish the Representatives with a copy of any comment letters or provide an oral summary of any oral comments received, and furnish the Representatives with copies of any written responses thereto a reasonable amount of time prior to the proposed filing thereof with the Commission and will not file or use any such response to which the Representatives or counsel for the Underwriters shall object), (iii) of any request by the Commission for any amendment to the Registration Statement or any amendment or supplement to any preliminary prospectus or the Prospectus, or any Issuer Free Writing Prospectus or for additional information, (iv) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or of any order preventing or suspending the use of any preliminary prospectus, the Prospectus or any Issuer Free Writing Prospectus or any amendment or supplement to any of the foregoing, or any notice from the Commission objecting to the use of the form of the Registration Statement or any post-effective amendment thereto, or of the suspension of the qualification of the Securities for offering or sale in any jurisdiction or of the loss or suspension of any

exemption from any such qualification, or of the initiation or threatening of any proceedings for any of such purposes, or of any examination pursuant to Section 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 make every reasonable effort to prevent the issuance of any stop order and the suspension or loss of any qualification of the Securities for offering or sale and any loss or suspension of any exemption from any such qualification, and if any such stop order is issued, or any such suspension or loss occurs, to obtain the lifting thereof at the earliest possible moment.

(b) *Filing of Amendments.* The Company will give the Representatives notice of its intention to file or prepare any amendment to the Registration Statement, any Rule 462(b) Registration Statement, any Issuer Free Writing Prospectus or any amendment, supplement or revision to any preliminary prospectus, the Prospectus or any Issuer Free Writing Prospectus, whether pursuant to the 1933 Act or otherwise, and the Company will furnish the Representatives with copies of any such documents within a reasonable amount of time prior to such proposed filing or use, as the case may be, and will not file or use any such document to which the Representatives or counsel for the Underwriters shall reasonably object.

(c) *Delivery of Registration Statements.* The Company has furnished or will deliver to the Representatives and counsel for the Underwriters, without charge, copies of the Initial Registration Statement and any Rule 462(b) Registration Statement and of each amendment thereto (including exhibits filed therewith and copies of all consents and certificates of experts. 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 and any amendments or supplements thereto as such Underwriter reasonably requested, and the Company hereby consents to the use of such copies for purposes permitted by the 1933 Act and other applicable securities laws. The Company will furnish to each Underwriter, without charge, during the period when the Prospectus is required (or, but for the provisions of Rule 172, would be required) to be delivered by applicable law (whether to meet the request of purchasers pursuant to Rule 173(d) or otherwise), such number of copies of the Pre-Pricing Prospectus, the Prospectus and any Issuer Free Writing Prospectus and any amendments or supplements to any of the foregoing as such Underwriter may reasonably request. Each preliminary prospectus, the Prospectus, Issuer Free Writing Prospectus and any amendments or supplements to any of the foregoing furnished to the Underwriters were and 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) *Continued Compliance with Securities Laws.* The Company will comply with the 1933 Act, the 1933 Act Regulations, the 1934 Act and the 1934 Act Regulations so as to permit the completion of the distribution of the Securities as contemplated by this Agreement, the General Disclosure Package and the Prospectus. If at any time when a prospectus is required (or, but for the provisions of Rule 172, would be required) by the applicable law to be delivered in connection with sales of the Securities (whether to meet the request of purchasers pursuant to Rule 173(d) or otherwise), any event shall occur or condition shall exist as a result of which it is necessary (or if the Representatives or counsel for the Underwriters shall notify the Company that, in their judgment, it is necessary) to amend the Registration Statement or amend or supplement the General Disclosure Package or the Prospectus so that the Registration Statement, 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, in the light of the circumstances under which they were made or then prevailing, not misleading or if it is necessary (or if the Representatives or counsel for the Underwriters shall notify the Company that, in their judgment, it is necessary) to amend the Registration Statement or amend or supplement the General Disclosure Package or the Prospectus in order to comply with the requirements of the 1933 Act, the 1933 Act Regulations, the 1934 Act or the 1934 Act Regulations, the Company will promptly notify the Representatives of such event or condition and of its intention to file such amendment or supplement (or, if the Representatives or counsel for the Underwriters shall have notified the Company as aforesaid, the Company will promptly notify the Representatives of its intention to prepare such amendment or supplement) and will promptly prepare and

file with the Commission, subject to Section 3(b) hereof, such amendment or supplement as may be necessary to correct such untrue statement or omission or to comply with such requirements, and, in the case of an amendment or post-effective amendment to the Registration Statement, the Company will use its best efforts to have such amendment declared or become effective as soon as practicable, and the Company will furnish to the Underwriters such number of copies of such amendment or supplement as the Underwriters may reasonably request. If at any time an Issuer Free Writing Prospectus conflicts with the information contained in the Registration Statement or if an event shall occur or condition shall exist as a result of which it is necessary (or, if the Representatives or counsel for the Underwriters shall notify the Company that, in their judgment, it is necessary) to amend or supplement such Issuer Free Writing Prospectus so that it will not include an untrue statement of a material fact or 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 or then prevailing, not misleading, or if it is necessary (or, if the Representatives or counsel for the Underwriters shall notify the Company that, in their judgment, it is necessary) to amend or supplement such Issuer Free Writing Prospectus in order to comply with the requirements of the 1933 Act or the 1933 Act Regulations, the Company will promptly notify the Representatives of such event or condition and of its intention to file such amendment or supplement (or, if the Representatives or counsel for the Underwriters shall have notified the Company as aforesaid, the Company will promptly notify the Representatives of its intention to prepare such amendment or supplement) and will promptly prepare and, if required by the 1933 Act or the 1933 Act Regulations, file with the Commission, subject to Section 3(b) hereof, such amendment or supplement as may be necessary to eliminate or correct such conflict, untrue statement or

omission or to comply with such requirements, and the Company will furnish to the Underwriters such number of copies of such amendment or supplement as the Underwriters may reasonably request.

(f) *Blue Sky and Other Qualifications.* The Company will use its reasonable best efforts, in cooperation with the Underwriters, to qualify the Securities for offering and sale, or to obtain an exemption for the Securities to be offered and sold, under the applicable securities laws of such states and other jurisdictions (domestic or foreign) as the Representatives may designate and to maintain such qualifications and exemptions in effect for so long as required for the distribution of the Securities (but in no event for a period of not less than one year from the date of this Agreement); 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. In each jurisdiction in which the Securities have been so qualified or exempt, the Company will file such statements and reports as may be required by the laws of such jurisdiction to continue such qualification or exemption, as the case may be, in effect for so long as required for the distribution of the Securities (but in no event for a period of not less than one year from the date of this Agreement).

(g) *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.

(h) *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 General Disclosure Package and the Prospectus under "Use of Proceeds."

(i) *Listing.* The Company will use its best efforts to effect the listing of the Securities on the Nasdaq Global Market as and when required by this Agreement.

(j) *Restriction on Sale of Securities.* During the Lock-Up Period, the Company will not, without the prior written consent of the Representatives, directly or indirectly:

(i) issue, 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, lend or otherwise transfer or dispose of any shares of Common Stock or other Capital Stock or any

securities convertible into or exercisable or exchangeable for Common Stock or other Capital Stock,

(ii) file or cause the filing of any registration statement under the 1933 Act with respect to any Common Stock or other Capital Stock or any securities convertible into or exercisable or exchangeable for any Common Stock or other Capital Stock (other than any Rule 462(b) Registration Statement filed to register Securities to be sold to the Underwriters pursuant to this Agreement and other than registration statements on Form S-8 filed with the Commission after the Closing Date), or

(iii) enter into any swap or other agreement, arrangement, hedge or transaction that transfers to another, in whole or in part, directly or indirectly, any of the economic consequences of ownership of any Common Stock or other Capital Stock or any securities convertible into or exercisable or exchangeable for any Common Stock or other Capital Stock,

whether any transaction described in clause (i) or (iii) above is to be settled by delivery of Common Stock, other Capital Stock, other securities, in cash or otherwise, or publicly announce any intention to do any of the foregoing.

Notwithstanding the provisions set forth in the immediately preceding paragraph, the Company may, without the prior written consent of the Representatives:

(1) issue Securities to the Underwriters pursuant to this Agreement,

(2) issue shares of Common Stock, options to purchase shares of Common Stock or other securities or awards pursuant to employee or director stock option, stock purchase or other equity incentive plans described in the General Disclosure Package and the Prospectus as those plans are in effect on the date of this Agreement,

(3) issue shares of Common Stock upon the exercise of stock options or settlement of other securities or awards issued under equity incentive plans referred to in clause (2) above, as those plans are in effect on the date of this Agreement, or upon the exercise of warrants or convertible securities outstanding on the date of this Agreement, as those warrants and convertible securities are in effect on the date of this Agreement,

(4) issue shares of Common Stock to one or more counterparties in connection with the consummation of a bona fide strategic partnership, joint venture, collaboration, merger or the acquisition or license of any business products or technology, and

(5) issue shares of Common Stock to NEA in the Concurrent Private Placement,

provided, however, that in the case of any issuance described in clauses (2), (3), (4) and (5) above, it shall be a condition to the issuance that each recipient executes and delivers, or has previously executed and delivered, to the Representatives, acting on behalf of the Underwriters, not later than one business day prior to the date of such issuance, a written agreement, in substantially the form of Exhibit C to this Agreement and otherwise satisfactory in form and substance to the Representatives; provided further, however, in the case of any issuance described in clause (4) above, the sum of the aggregate number of shares of Common Stock so issued shall not exceed 10% of the total outstanding shares of Common Stock immediately following the completion of the offering contemplated by this Agreement.

If the Representatives, in their sole and absolute discretion, agree to release or waive the restrictions set forth in a lock-up agreement described in Section 5(h) hereof to permit the transfer of shares of Common Stock or other securities by an officer or director of the Company and provides 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 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.

(k) *Reporting Requirements.* The Company, during the period when the Prospectus is required (or, but for the provisions of Rule 172, would be required) by applicable law to be delivered (whether to meet the request of purchasers pursuant to Rule 173(d) or otherwise), will file all documents required to be filed with the Commission pursuant to the 1934 Act and the 1934 Act Regulations within the time periods required by the 1934 Act and the 1934 Act Regulations.

(l) *Preparation of Prospectus.* Promptly following the execution of this Agreement, the Company will, subject to Section 3(b) hereof, prepare the Prospectus, which shall contain the selling terms of the Securities, the plan of distribution thereof and such other information as may be required by the 1933 Act or the 1933 Act Regulations or as the Representatives and the Company may deem appropriate, and, if requested by the Representatives, will prepare an Issuer Free Writing Prospectus containing the information set forth in Exhibit D hereto and such other information as may be required by Rule 433 or as the Representatives and the Company may deem appropriate, and will file or transmit for filing with the Commission the Prospectus in accordance with the provisions of Rule 430A and in the manner and within the time period required by Rule 424(b) (without reliance on Rule 424(b)(8)) and any such Issuer Free Writing Prospectus in the manner and within the time period required by Rule 433.

(m) *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 completion of the 180th day after the date of this Agreement..

(n) *Testing-the-Waters Writings.* If at any time following the distribution of any Testing-the-Waters Writing by or with the consent of the Company there occurs an event or condition as a result of which such Testing-the-Waters Writing would include an untrue statement of a material fact 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 of such event or condition and the Company will promptly amend or supplement such Testing-the-Waters Writing as may be necessary to eliminate or correct such untrue statement or omission.

SECTION 4. Payment of Expenses.

(a) *Expenses.* The Company will pay all expenses incident to the performance of its obligations under this Agreement, including (i) the preparation, printing and filing of the Registration Statement and each amendment thereto (in each case including exhibits) and any costs associated with electronic delivery of any of the foregoing, (ii) the word processing and delivery to the Underwriters of this Agreement and such other documents as may be required in connection with the offering, purchase, sale, issuance or delivery of the Securities, (iii) the preparation, issuance and delivery of the certificates for the Securities and the issuance and delivery of the Securities to the Underwriters, including any stock or other transfer taxes and any stamp or other taxes or duties payable in connection with the sale, issuance or delivery of the Securities to the Underwriters, (iv) the fees and disbursements of the counsel, accountants and other advisors to the Company, (v) the qualification or exemption of the Securities under securities laws in accordance with the provisions of Section 3(f) hereof, including filing fees and the reasonable fees and disbursements of counsel for the Underwriters in connection therewith and in connection with the preparation of the Blue Sky Survey and any supplements thereto and the reasonable fees and disbursements of special Canadian counsel for the Underwriters in connection with the preparation of any Canadian "wrapper," provided such fees and disbursements do not exceed $10,000 in the aggregate, (vi) the preparation, printing and delivery to the Underwriters of copies of each preliminary prospectus, any Testing-the-Waters Writing, any Permitted Free Writing Prospectus and the Prospectus and any amendments or supplements to any of the foregoing and any costs associated with electronic delivery of any of the foregoing, (vii) the preparation, printing and delivery to the Underwriters of copies of the Blue Sky Survey and any Canadian "wrapper" and any supplements thereto and any costs associated with electronic delivery of any of the foregoing, (viii) the fees and expenses of the transfer agent and registrar for the Securities, (ix) the filing fees incident to, and the reasonable fees and disbursements of counsel to the Underwriters in connection with, the review, if any, by FINRA of the terms of the sale of the Securities; provided such fees and disbursements do not exceed $30,000 in the aggregate, (x) the fees and expenses

incurred in connection with the listing of the Securities on the Nasdaq Global Market, and (xi) the costs and expenses of the Company and any of its officers, directors, counsel or other representatives in connection with presentations or meetings undertaken in connection with the offering of the Securities, including, without limitation, expenses associated with the production of any Testing-the-Waters Writing and road show slides and graphics and the production and hosting of any electronic road shows, fees and expenses of any consultants engaged in connection with road show presentations, and travel, lodging, transportation, and other expenses of the officers, directors, counsel and other representatives of the Company incurred, and 50% of the cost of any aircraft chartered in connection with any such presentations or meetings, including any meetings made in reliance on Section 5(d) of the 1933 Act.

(b) *Termination of Agreement.* If this Agreement is terminated by the Representatives in accordance with the provisions of Section 5 or Section 9(a) hereof, (i) prior to the Closing date, the Company shall reimburse the Underwriters for all of their out-of-pocket expenses, including the reasonable fees and disbursements of counsel for the Underwriters or (ii) after the Closing Date but prior to any Option Closing Date with respect to the purchase of any Option Securities pursuant to a notice delivered by the Representatives to the Company under Section 2(b) hereof, the Company shall reimburse the Underwriters for all of their out-of-pocket expenses, including the reasonable fees and disbursements of counsel for the Underwriters, incurred in connection with the proposed purchase of any such Option Securities.

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 in this Agreement, or in certificates signed by any officer of the Company (whether signed on behalf of such officer or the Company) delivered pursuant to the provisions hereof to the Representatives or counsel for the Underwriters, to the performance by the Company of its covenants and other obligations hereunder, and to the following further conditions:

(a) *Effectiveness of Registration Statement.* The Initial Registration Statement and any post-effective amendments thereto shall have been declared effective, any Rule 462(b) Registration Statement shall have become effective, and no stop order suspending the effectiveness of the Initial Registration Statement or any Rule 462(b) Registration Statement shall have been issued under the 1933 Act or proceedings therefor initiated or, to the knowledge of the Company, threatened by the Commission, and any request on the part of the Commission for additional information shall have been complied with to the reasonable satisfaction of the Representatives and the Commission shall not have notified the Company of any objection to the use of the form of the Registration Statement. The Prospectus shall have been filed with the Commission in the manner and within the time period required by Rule 424(b) (without reliance upon Rule 424(b)(8)) and each Issuer Free Writing Prospectus required to be filed with the Commission shall have been

filed in the manner and within the time period required by Rule 433, and, prior to the Closing Date, the Company shall have provided evidence satisfactory to the Representatives of such timely filings if so requested by the Representatives.

(b) *Opinion of Counsel for Company.* At the Closing Date, the Representatives shall have received (1) the favorable opinion and negative assurance letter, each dated as of the Closing Date, of Cooley LLP, counsel for the Company ("Company Counsel"), in form and substance satisfactory to the Representatives, together with signed or reproduced copies of such opinion and letter for each of the other Underwriters, and (2) the favorable opinion, dated as of the Closing Date, of Wilson Sonsini Goodrich & Rosati LLP, special intellectual property counsel to the Company, in form and substance satisfactory to the Representatives, together with signed or reproduced copies of such opinion for each of the other Underwriters.

(c) *Opinion of Counsel for Underwriters.* At the Closing Date, the Representatives shall have received the favorable opinion and negative assurance letter, each dated as of Closing Date, of Latham & Watkins LLP, counsel for the Underwriters, together with signed or reproduced copies of such opinion and negative assurance letter for each of the other Underwriters, with respect to the Securities to be sold by the Company pursuant to this Agreement, this Agreement, the Initial Registration Statement, any Rule

462(b) Registration Statement, the General Disclosure Package and the Prospectus and any amendments or supplements thereto and such other matters as the Representatives may reasonably request.

(d) *Officers' Certificate.* At the Closing Date or the applicable Option Closing Date, as the case may be, 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 and the Prospectus (in each case exclusive of any amendments or supplements thereto subsequent to the date of this Agreement), any material adverse change or any development that would reasonably be expected to result in a material adverse change, in the condition (financial or otherwise), results of operations, business, properties, management or prospects of the Company taken as a whole, whether or not arising in the ordinary course of business, and, at the Closing Date, the Representatives shall have received a certificate, signed on behalf of the Company by the President or the Chief Executive Officer of the Company and the Chief Financial Officer or Chief Accounting Officer of the Company, dated as of Closing Date, to the effect that (i) there has been no such material adverse change, (ii) the representations and warranties of the Company in this Agreement are true and correct at and as of the Closing Date with the same force and effect as though expressly made at and as of Closing Date, (iii) the Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied at or prior to Closing Date under or pursuant to this Agreement, and (iv) no stop order suspending the effectiveness of the Registration Statement has been issued and no proceedings for that purpose have been instituted or are pending or, to the knowledge of the Company, are contemplated by the Commission and the Commission has not notified the Company of any objection to the use of the form of the Registration Statement.

(e) *Accountant's Comfort Letter.* At the time of the execution of this Agreement, the Representatives shall have received from Ernst & Young LLP a letter, dated the date of this Agreement and 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 of the Company contained in the Registration Statement, the General Disclosure Package, any Issuer Free Writing Prospectuses (other than any electronic road show) and the Prospectus and any amendments or supplements to any of the foregoing

(f) *Bring-down Comfort Letter.* At the Closing Date, the Representatives shall have received from Ernst & Young LLP a letter, dated as of Closing Date and in form and substance satisfactory to the Representatives, 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 Closing Date.

(g) *Approval of Listing.* At the Closing Date and each Option Closing Date, if any, the Securities to be purchased by the Underwriters at such time shall have been approved for listing on the Nasdaq Global Market, subject only to official notice of issuance.

(h) *Lock-up Agreements.* Prior to the date of this Agreement, the Representatives shall have received an agreement substantially in the form of Exhibit C hereto signed by each of the executive officers and directors of the Company and substantially all of the securityholders of the Company.

(i) *No Objection.* Prior to the date of this Agreement, FINRA shall have confirmed in writing that it has no objection with respect to the fairness and reasonableness of the underwriting terms and arrangements.

(j) *Pre-Closing Transactions.* Prior to the purchase of the Initial Securities on the Closing Date, the Pre-Closing Transactions shall have been duly consummated at the respective times and on the terms contemplated by this Agreement, the General Disclosure Package and the Prospectus and the Representatives shall have received a copy of the amended and restated charter of the Company certified by the Secretary of State of the State of Delaware, and such other evidence that the Pre-Closing Transactions have been consummated as the Representatives may reasonably request.

(k) *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 on any Option Closing Date that is after the Closing Date, the obligations of the several Underwriters to purchase the applicable Option Securities shall be subject to the conditions specified in the introductory paragraph of this Section 5 and to the further condition that, at the applicable Option Closing Date, the Representatives shall have received:

(1) Opinion of Counsel for Company. The favorable opinion and negative assurance letter of Company Counsel and favorable opinion of each other counsel named in Section 5(b), each in form and substance satisfactory to the Representatives and dated such Option Closing Date, relating to the Option Securities to be purchased on such Option Closing Date and otherwise to the same effect as the respective opinions required by Section 5(b) hereof.

(2) Opinion of Counsel for Underwriters. The favorable opinion and negative assurance letter of Latham & Watkins LLP, counsel for the Underwriters, in form and substance satisfactory to the Representatives and dated such Option Closing Date, relating to the Option Securities to be purchased on such Option Closing Date and otherwise to the same effect as the opinion required by Section 5(c) hereof.

(3) Officers' Certificate. A certificate, dated such Option Closing Date, to the effect set forth in, and signed on behalf of the Company by the officers specified in, Section 5(d) hereof, except that the references in such certificate to the Closing Date shall be changed to refer to such Option Closing Date.

(4) Bring-down Comfort Letter. A letter from Ernst & Young LLP, in form and substance satisfactory to the Representatives and dated such Option Closing Date, 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 Option Closing Date, and except that such letter shall also cover any amendments or supplements to the Registration Statement, any Issuer Free Writing Prospectus (other than any electronic road show) and the Prospectus subsequent to the Closing Date.

(l) *Additional Documents.* At the Closing Date and each Option Closing Date, counsel for the Underwriters shall have been furnished with such 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, contained in this Agreement, or as the Representatives or counsel for the Underwriters may otherwise reasonably request; and all proceedings taken by the Company in connection with the issuance and sale of the Securities as herein contemplated and in connection with the other transactions contemplated by this Agreement shall be reasonably satisfactory in form and substance to the Representatives.

(m) *Termination of Agreement.* If any condition specified in this Section 5 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 an Option Closing Date which is after the Closing Date, the obligations of the several Underwriters to purchase the relevant Option Securities on such Option Closing Date, may be terminated by the Representatives by notice to the Company at any time on or prior to the Closing Date or such Option Closing Date, 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 hereof and except that, in the case of any such termination of this Agreement, Sections 1, 6, 7, 8, 11, 12, 13, 14, 15, 17, 18, and 19 hereof shall survive such termination of this Agreement and remain in full force and effect.

SECTION 6. Indemnification.

(a) *Indemnification by the Company.* The Company agrees to indemnify and hold harmless each Underwriter, its affiliates, and its and their officers, directors, employees, partners and members 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), 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 in any preliminary prospectus, any Issuer Free Writing Prospectus, the General Disclosure Package or the Prospectus (or any amendment or supplement to any of the foregoing), or in any "issuer information" (as defined in Rule 433), or in any "road show" (as defined in Rule 433) that does not constitute an Issuer Free Writing Prospectus, or in any Testing-the-Waters Writing distributed by or with the consent of the Company, or the omission or alleged omission therefrom 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; and

(iii) against any and all expense whatsoever, as incurred (including the fees and disbursements of counsel), reasonably incurred in investigating, preparing for 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 reliance upon and in conformity with written information furnished to the Company by any Underwriter through the Representatives expressly for use in the Registration Statement (or any amendment thereto), or in any preliminary prospectus, any Issuer Free Writing Prospectus, the General Disclosure Package or the Prospectus (or in any amendment or supplement to any of the foregoing), or any "issuer information" (as defined in Rule 433) filed or required to be filed pursuant to Rule 433(d), or any "road show" (as defined in Rule 433) that does not constitute an Issuer Free Writing Prospectus, or in any Testing-the-Waters Writing, it being understood and agreed that the only such information furnished by the Underwriters as aforesaid consists of the information described as such in Section 6(b) hereof.

(b) *Indemnification by the Underwriters*. Each Underwriter agrees, severally and not jointly, 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 6, 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), or in any preliminary prospectus, any Issuer Free Writing Prospectus, the General Disclosure Package or the Prospectus (or any amendment or supplement to any of the foregoing), or any "road show" (as defined in Rule 433) that does not constitute an Issuer Free Writing Prospectus, or in any Testing-the-Waters Writing, in reliance upon and in conformity with written information furnished to the Company by such Underwriter through the Representatives expressly for use therein. The Company hereby acknowledges and agrees that the information furnished to the Company by the Underwriters through the Representatives expressly for use in the Registration Statement (or any amendment thereto), or in any preliminary prospectus, any Issuer Free Writing Prospectus, the General Disclosure

Package or the Prospectus (or any amendment or supplement to any of the foregoing), or in any "road show" (as defined in Rule 433) that does not constitute an Issuer Free Writing Prospectus, or in any Testing-the-Waters Writing, consists exclusively of the following information appearing under the caption "Underwriting" in the Pre-Pricing Prospectus and the Prospectus: (i) the information regarding the concession and reallowance appearing in the first paragraph under the caption "Discounts and Commissions", (ii) the information regarding stabilization, syndicate covering transactions and penalty bids appearing in the first paragraph (other than the last sentence), the second paragraph and the fourth paragraph (but only insofar as such information concerns the Underwriters) under the caption "Stabilization" and (iii) the information regarding the limitation on sales to discretionary accounts appearing in the single paragraph under the caption "Discretionary Accounts".

(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 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. Counsel to the indemnified parties shall be selected as follows: counsel to the Underwriters and the other indemnified parties referred to in Section 6(a) above shall be selected by the Representatives; and counsel to 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 shall be selected by the Company. An indemnifying party may participate at its own expense in the defense of any such action; provided, however, that counsel to the indemnifying party shall not (except with the consent of the indemnified party) also be counsel to the indemnified party. In no event shall the indemnifying party be liable for the fees and expenses of more than one counsel (in addition to any local counsel) separate from their own counsel for the Underwriters and the other indemnified parties referred to in Section 6(a) above; and the fees and expenses of more than one counsel (in addition to any local counsel) separate from their own counsel for 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, in each case 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 as contemplated by this Section 6, such indemnifying party agrees that it shall be liable for any settlement of the nature contemplated by Section 6(a)(ii) effected without its written consent if (i) such settlement is entered into more than 60 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 45 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.

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 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 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 and the total underwriting discounts and commissions received by the Underwriters, 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 such cover.

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.

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 legal or other expenses reasonably incurred by such indemnified party in investigating, preparing for 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 amount by which the total price at which the Securities underwritten by it and distributed to the public were offered to the public exceeds the amount of any damages which such Underwriter has otherwise been required to pay by reason of any such untrue or alleged untrue statement or omission or alleged omission.

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 affiliate of any Underwriter, each officer, director, employee, partner and member of any Underwriter or any such affiliate, 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 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 Exhibit A hereto and not joint.

SECTION 8. Representations, Warranties and Agreements to Survive Delivery. All representations, warranties and agreements contained in this Agreement or in certificates signed by any officer of the Company (whether signed on behalf of such officer or the Company) and delivered to the Representatives or counsel to the Underwriters, shall remain operative and in full force and effect, regardless of any investigation made by or on behalf of any Underwriter, any officer, director, employee, partner, member or agent of any Underwriter or any person controlling any Underwriter, or by or on behalf of the Company, any officer, director or employee of the Company or any person controlling the Company, and shall survive delivery of and payment for the Securities.

SECTION 9. Termination of Agreement.

(a) *Termination; General.* The Representatives may terminate this Agreement, by notice to the Company, at any time on or prior to the Closing Date (and, if any Option Securities are to be purchased on an Option Closing Date which occurs after the Closing Date, the Representatives may terminate the obligations of the several Underwriters to purchase such Option Securities, by notice to the Company at any time on or prior to such Option Closing Date) (i) if there has been, at any time on or after the date of this Agreement or since the respective dates as of which information is given in the General Disclosure Package or the Prospectus (in each case exclusive of any amendments or supplements thereto subsequent to the date of this Agreement), any material adverse change

or any development that could reasonably expected to result in a material adverse change in the condition (financial or other), results of operations, business, properties, management or prospects of the Company taken as a whole, whether or not arising in the ordinary course of business, or (ii) if there has occurred any material adverse change in the financial markets in the United States or the international financial markets, any declaration of a national emergency or war by the United States, 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 (including, without limitation, as a result of terrorist activities), in each case the effect of which is such as to make it, in the judgment of the Representatives, impracticable or inadvisable to market the Securities or to enforce contracts for the sale of the Securities, or (iii) if (A) trading in any securities of the Company has been suspended or materially limited by the Commission or the Nasdaq Global Market, or (B) trading generally on the NYSE, the Nasdaq Global Select Market, the Nasdaq Global Market, the NYSE MKT, the Chicago Board of Options Exchange, the Chicago Mercantile Exchange or the Chicago Board of Trade has been suspended or 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 (C) a material disruption has occurred in commercial banking or securities settlement or clearance services in the United States or in Europe, or (iv) 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 9, 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, 11, 12, 13, 14, 15, 17, 18, and 19 hereof shall survive such termination and remain in full force and effect.

SECTION 10. Default by One or More of the Underwriters.

(a) If one or more of the Underwriters shall fail at the Closing Date or an Option Closing Date 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:

(1) 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 of such Defaulted Securities in the proportions that their respective underwriting obligations hereunder bear to the underwriting obligations of all non-defaulting Underwriters; or

(2) 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 Option Closing Date which occurs after the Closing Date, the obligation of the Underwriters to purchase and of the Company to sell the Option Securities that were to have been purchased and sold on such Option Closing Date, shall terminate without liability on the part of any non-defaulting Underwriter.

No action taken pursuant to this Section 10(a) shall relieve any defaulting Underwriter from liability in respect of its default.

In the event of any such default which does not result in a termination of this Agreement or, in the case of an Option Closing Date which is after the Closing Date, which does not result in a termination of the obligations of the Underwriters to purchase and the Company to sell the relevant Option Securities, as the case may be, the Representatives shall have the right to postpone the Closing Date or the relevant Option Closing Date, 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 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, shall be effective only upon receipt and shall be mailed, delivered by hand or overnight courier, or transmitted by fax (with

the receipt of such fax to be confirmed by telephone). Notices to the Underwriters shall be directed to the Representatives at Wells Fargo Securities, LLC, 375 Park Avenue, New York, New York 10152, Attention of Equity Syndicate, fax no. 212-214-5918 (with such fax to be confirmed by telephone to 212-214-6144); and Stifel, Nicolaus & Company, Incorporated, One Montgomery Street, Suite 3700, San Francisco, CA 94104, Attention of Syndicate, fax no. 415-364-2694 (with such fax to be confirmed by telephone to 415-364-2991); notices to the Company shall be directed to it at 8910 University Center Lane, Suite 700, San Diego, CA 92122, Attention of Chief Executive Officer, fax no. 858-550-0786 (with such fax to be confirmed by telephone to 858-550-0780).

SECTION 12. 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 other indemnified parties referred to in Sections 6 and 7 and their successors, 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 other indemnified parties and their successors, heirs and legal representatives, and for the benefit of no other person or entity. No purchaser of Securities from any Underwriter shall be deemed to be a successor by reason merely of such purchase.

SECTION 13. GOVERNING LAW AND TIME. THIS AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK. EXCEPT AS OTHERWISE EXPRESSLY SET FORTH HEREIN, SPECIFIED TIMES OF DAY REFER TO NEW YORK CITY TIME.

SECTION 14. Effect of Headings. The Section and Exhibit headings herein are for convenience only and shall not affect the construction hereof.

SECTION 15. Definitions. As used in this Agreement, the following terms have the respective meanings set forth below:

"Applicable Time" means [·] (New York City time) on [·] or such other time as agreed by the Company and the Representatives.

"Capital Stock" means any Common Stock, Convertible Preferred Stock, Preferred Stock or other capital stock of the Company.

"Commission" means the Securities and Exchange Commission.

"Company Documents" means (i) all Subject Instruments and (ii) all other contracts, indentures, mortgages, deeds of trust, loan or credit agreements, bonds, notes, debentures, evidences of indebtedness, swap agreements, leases or other instruments or agreements to which the Company is a party or by which the Company is bound or to which any of the property or assets of the Company is subject.

"Convertible Preferred Stock" means the Company's convertible preferred stock, par value $0.001 per share.

"DTC" means The Depository Trust Company.

"EDGAR" means the Commission's Electronic Data Gathering, Analysis and Retrieval System.

"ERISA" means the Employee Retirement Income Security Act of 1974, as amended, and the regulations and published interpretations thereunder.

"Existing Credit Agreement" means the Loan and Security Agreement, by and between the Company and Silicon Valley Bank, dated November 14, 2013, as amended on June 4, 2014, as it may be further amended,

supplemented or restated, if applicable, and including any promissory notes, pledge agreements, security agreements, mortgages, guarantees and other instruments or agreements entered into by the Company in connection therewith or pursuant thereto, in each case as amended, supplemented or restated, if applicable.

"Existing Warrants" means any warrants to purchase Common Stock outstanding on the date of this Agreement.

"FCPA" means the Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder.

"FINRA" means the Financial Industry Regulatory Authority, Inc. or the National Association of Securities Dealers, Inc., or both, as the context shall require.

"GAAP" means generally accepted accounting principles.

"Initial Registration Statement" means the Company's registration statement on Form S-1 (Registration No. 333-[•]), as amended, including the Rule 430A Information from and after the time that such Rule 430A information is deemed, pursuant to Rule 430A, to be part of and included in the Initial Registration Statement.

"Issuer Free Writing Prospectus" means any "issuer free writing prospectus," as defined in Rule 433, relating to the offering of Securities that (i) is required to be filed with the Commission by the Company, (ii) is 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) is exempt from filing 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, and all free writing prospectuses that are listed in Exhibit E hereto, 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 or required to be 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, as evidenced by its being specified in Exhibit E hereto.

"Issuer Limited Use Free Writing Prospectus" means any Issuer Free Writing Prospectus that is not an Issuer General Use Free Writing Prospectus.

"Lien" means any security interest, mortgage, pledge, lien, encumbrance, claim or equity.

"Lock-Up Period" means the period beginning on and including the date of this Agreement through and including the date that is the 180th day after the date of this Agreement.

"NYSE" means the New York Stock Exchange.

"OFAC" means the Office of Foreign Assets Control of the U.S. Treasury Department.

"Organizational Documents" means (a) in the case of a corporation, its charter and by-laws; (b) in the case of a limited or general partnership, its partnership certificate, certificate of formation or similar organizational document and its partnership agreement; (c) in the case of a limited liability company, its articles of organization, certificate of formation or similar organizational documents and its operating agreement, limited liability company agreement, membership agreement or other similar agreement; (d) in the case of a trust, its certificate of trust, certificate of formation or similar organizational document and its trust agreement or other similar agreement; and (e) in the case of any other entity, the organizational and governing documents of such entity.

"PCAOB" means the Public Company Accounting Oversight Board (United States).

"Pre-Pricing Prospectus" means the preliminary prospectus dated [·], 2015 relating to the Securities in the form first furnished to the Underwriters for use in connection with the offering of the Securities.

"Preferred Stock" means the Company's preferred stock, par value $0.001 per share.

"preliminary prospectus" means any prospectus used in connection with the offering of the Securities that omitted the public offering price of the Securities or that was captioned "Subject to Completion." The term "preliminary prospectus" includes, without limitation, the Pre-Pricing Prospectus.

"Registration Statement" means the Initial Registration Statement; provided that, if a Rule 462(b) Registration Statement is filed with the Commission, then the term "Registration Statement" shall include such Rule 462(b) Registration Statement from and after the time of such filing, mutatis mutandis.

"Regulation S-T" means Regulation S-T of the Commission.

"Repayment Event" means any event or condition which, either immediately or with notice or passage of time or both, (i) gives the holder of any bond, 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 (ii) gives any counterparty (or any person acting on such counterparty's behalf) under any swap agreement, hedging agreement or similar agreement or instrument to which the Company is a party the right to liquidate or accelerate the payment obligations or designate an early termination date under such agreement or instrument, as the case may be.

"Rule 164," "Rule 172," "Rule 173," "Rule 405," "Rule 424(b)," "Rule 430A," "Rule 430C," "Rule 433" and "Rule 462(b)" refer to such rules under the 1933 Act.

"Rule 430A Information" means the information included in the Prospectus or any amendment or supplement thereto that was omitted from the Initial Registration Statement at the time it became effective but that is deemed to be a part of the Initial Registration Statement at the time it became effective pursuant to Rule 430A.

"Rule 462(b) Registration Statement" means a registration statement filed by the Company pursuant to Rule 462(b) for the purpose of registering any of the Securities under the 1933 Act, including the documents and other information incorporated by reference therein and the Rule 430A Information.

"Sarbanes-Oxley Act" means the Sarbanes-Oxley Act of 2002 and the rules and regulations promulgated thereunder or implementing the provisions thereof.

"Subject Instruments" means the Existing Credit Agreement, the Stockholder Documents, the Existing Warrants, and all other instruments, agreements and documents filed as exhibits to the Registration Statement pursuant to Rule 601(b)(10) of Regulation S-K of the Commission; provided that if any instrument, agreement or other document filed as an exhibit to the Registration Statement as aforesaid has been redacted or if any portion thereof has been deleted or is otherwise not included as part of such exhibit (whether pursuant to a request for confidential treatment or otherwise), the term "Subject Instruments" shall nonetheless mean such instrument, agreement or other document, as the case may be, in its entirety, including any portions thereof which shall have been so redacted, deleted or otherwise not filed.

"Termination Event" means any event or condition which gives any person the right, either immediately or with notice or passage of time or both, to terminate or limit (in whole or in part) any Company Documents or any rights of the Company thereunder, including, without limitation, upon the occurrence of a change of control of the Company or other similar events.

"1933 Act" means the Securities Act of 1933, as amended.

"1933 Act Regulations" means the rules and regulations of the Commission under the 1933 Act.

"1934 Act" means the Securities Exchange Act of 1934, as amended.

"1934 Act Regulations" means the rules and regulations of the Commission under the 1934 Act.

"1940 Act" means the Investment Company Act of 1940, as amended.

All references in this Agreement to the Registration Statement, the Initial Registration Statement, any Rule 462(b) Registration Statement, any preliminary prospectus, the Prospectus, any Issuer Free Writing Prospectus or any amendment or supplement to any of the foregoing shall be deemed to include the version thereof filed with the Commission pursuant to EDGAR and all versions thereof delivered (physically or electronically) to the Representatives or the Underwriters.

SECTION 16. Permitted Free Writing Prospectuses. The Company and each Underwriter, severally and not jointly, represents, warrants and agrees that it has not made and, unless it obtains the prior written consent of the Company and the Representatives, it will not make, any offer relating to the Securities that constitutes or would constitute an "issuer free writing prospectus" (as defined in Rule 433) or that otherwise constitutes or would constitute a "free writing prospectus" (as defined in Rule 405) or portion thereof required to be filed with the Commission or required to be retained by the Company pursuant to Rule 433; provided that the prior written consent of the Representatives shall be deemed to have been given in respect of the Issuer General Use Free Writing Prospectuses, if any, listed on Exhibit E hereto, to any electronic road show in the form previously provided by the Company to and approved by the Representatives. Any such free writing prospectus consented to or deemed to have been consented to as aforesaid is hereinafter referred to as a "Permitted Free Writing Prospectus." The Company represents, warrants and agrees that it has treated and will treat each Permitted Free Writing Prospectus as an "issuer free writing prospectus," as defined in Rule 433, has complied and will comply with the requirements of Rule 433 applicable to any Permitted Free Writing Prospectus, including timely filing with the

Commission where required, legending and record keeping. For the purposes of clarity, the parties hereto agree that all free writing prospectuses, if any, listed in Exhibit E hereto are Permitted Free Writing Prospectuses.

SECTION 17. Absence of Fiduciary Relationship. The Company acknowledges and agrees that:

(a) each of the Underwriters is acting solely as an underwriter in connection with the sale of the Securities and no fiduciary, advisory or agency relationship between the Company on the one hand, and any of the Underwriters, on the other hand, has been created in respect of any of the transactions contemplated by this Agreement, irrespective of whether or not any of the Underwriters has advised or is advising the Company on other matters;

(b) the public offering price of the Securities and the price to be paid by the Underwriters for the Securities set forth in this Agreement were established by the Company following discussions and arms-length negotiations with the Representatives;

(c) it is capable of evaluating and understanding, and understands and accepts, the terms, risks and conditions of the transactions contemplated by this Agreement;

(d) it is aware that the Underwriters and their respective affiliates are engaged in a broad range of transactions which may involve interests that differ from those of the Company and that none of the Underwriters has any obligation to disclose such interests and transactions to the Company by virtue of any fiduciary, advisory or agency relationship or otherwise; and

(e) it waives, to the fullest extent permitted by law, any claims it may have against any of the Underwriters for breach of fiduciary duty or alleged breach of fiduciary duty and agrees that none of the Underwriters shall have any liability (whether direct or indirect, in contract, tort or otherwise) to it in respect of such a fiduciary duty claim or to any person asserting a fiduciary duty claim on its behalf or in right of it or the Company or any stockholders, employees or creditors of the Company.

SECTION 18. Research Analyst Independence. The Company acknowledges that the Underwriters' respective research analysts and research departments are required to be independent from their respective investment banking divisions and are subject to certain regulations and internal policies, and that such Underwriters' respective research analysts and research departments may hold views and make statements or investment recommendations and/or publish research reports with respect to the Company and/or the offering that differ from

the views of their respective investment banking divisions. The Company hereby waives and releases, to the fullest extent permitted by applicable law, any claims that the Company may have against the Underwriters with respect to any conflict of interest that may arise from the fact that the views expressed by their respective research analysts and research departments may be different from or inconsistent with the views or advice communicated to the Company by such Underwriters' respective investment banking divisions. The Company acknowledges that each of the Underwriters is a full service securities firm and as such from time to time, subject to applicable securities laws, may effect transactions for its own account or the account of its customers and hold long or short positions in debt or equity securities of the Company and other entities that may be the subject of the transactions contemplated by this Agreement.

SECTION 19. Trial By Jury. The Company (on its own 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 20. Consent to Jurisdiction. The Company hereby submits to the non-exclusive jurisdiction of any U.S. federal or state court located in the Borough of Manhattan, the City and County of New York in any action, suit or proceeding arising out of or relating to or based upon this Agreement or any of the transactions contemplated hereby, and irrevocably and unconditionally waives any objection to the laying of venue of any such action, suit or proceeding in any such court and agrees not to plead or claim in any such court that any such action, suit or proceeding has been brought in an inconvenient forum.

[Signature Page Follows]

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,

TRACON PHARMACEUTICALS, INC.

By _____
Name:
Title:

CONFIRMED AND ACCEPTED, as of the date first above written:

WELLS FARGO SECURITIES, LLC
STIFEL, NICOLAUS & COMPANY, INCORPORATED

By: WELLS FARGO SECURITIES, LLC

By _____
Authorized Signatory

By: STIFEL, NICOLAUS & COMPANY, INCORPORATED

By _____
Authorized Signatory

For themselves and as Representative of the Underwriters named in Exhibit A hereto.

EXHIBIT A

Name of Underwriter	Number of Initial Securities
Wells Fargo Securities, LLC	
Stifel, Nicolaus & Company, Incorporated	
Needham & Company, LLC	
Oppenheimer & Co. Inc.	
Total	

EXHIBIT B

FORM OF PRESS RELEASE ANNOUNCING LOCK-UP WAIVER

TRACON Pharmaceuticals, Inc.
_____, 20__

TRACON Pharmaceuticals, Inc. (the "Company") announced today that Wells Fargo Securities and Stifel, the lead book-running managers for the Company's initial public offering of ___ shares of common stock that closed on _____, 20__, are [waiving] [releasing] a lock-up restriction with respect to ___ shares of the Company's common stock held by [certain officers or directors] [an officer] [a director] of the Company. The [waiver] [release] will take effect on _____, 20__ and the shares may be sold on or after such date.

This press release is not an offer to sell or the solicitation of an offer to buy the securities in the United States or in any other jurisdiction 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.

EXHIBIT C

FORM OF LOCK-UP AGREEMENT

TRACON Pharmaceuticals, Inc.

Public Offering of Common Stock

Dated as of _____, 2014

Wells Fargo Securities, LLC
As Representative of the several Underwriters
c/o Wells Fargo Securities, LLC

375 Park Avenue
New York, New York 10152

Ladies and Gentlemen:

This agreement is being delivered to you in connection with the proposed Underwriting Agreement (the "Underwriting Agreement") among TRACON Pharmaceuticals, Inc., a Delaware corporation (the "Company"), Wells Fargo Securities, LLC ("Wells Fargo"), as representative of a group of underwriters (the "Underwriters"), and any additional Underwriter which is or may become a representative of the Underwriters as set forth in the Underwriting Agreement (any such Underwriter, together with Wells Fargo, the "Representatives"), relating to a proposed underwritten public offering of common stock (the "Common Stock") of the Company.

In order to induce you and the other Underwriters to enter into the Underwriting Agreement, and in light of the benefits that the offering of the Common Stock will confer upon the undersigned in its capacity as a securityholder and/or an officer 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 that, during the period beginning on and including the date hereof through and including the date that is the 180th day after the date of the Underwriting Agreement (the "Lock-Up Period"), the undersigned will not, without the prior written consent of the Representatives, 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, lend or otherwise transfer or dispose of any shares of the Company's Common Stock or preferred stock or other capital stock (collectively, "capital stock") or any securities convertible into or exercisable or exchangeable for Common Stock or other capital 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, or

(ii) enter into any swap or other agreement, arrangement or transaction that transfers to another, in whole or in part, directly or indirectly, any of the economic consequences of ownership of any Common Stock or other capital stock or any securities convertible into or exercisable or exchangeable for any Common Stock or other capital stock,

whether any transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock, other capital stock, other securities, in cash or otherwise, or publicly announce any intention to do any of the foregoing.

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 shares of Common Stock the undersigned may purchase in the offering contemplated by this agreement.

The foregoing provisions will not apply to (1) the transfer of shares of Common Stock or any security convertible into or exercisable or exchangeable for Common Stock upon the completion of a bona fide third-party tender offer, merger, consolidation or other similar transaction made to all holders of the Company's securities involving a change of control of the Company; and (2) the conversion of the outstanding preferred shares of the Company into shares of Common Stock, provided that any such shares received upon such conversion shall be subject to the restrictions on transfer set forth in this agreement. In addition, notwithstanding the provisions set forth in the immediately preceding paragraph, the undersigned may, without the prior written consent of the Representatives, transfer any Common Stock or other capital stock or any securities convertible into or exchangeable or exercisable for Common Stock or other capital stock:

(1) if the undersigned is a natural person, (a) as a bona fide gift or gifts or by will, by intestate succession or pursuant to a so-called "living trust" or other revocable trust established to provide for the disposition of property on the undersigned's death, in each case to any member of the immediate family (as defined below) of the undersigned or to a trust the beneficiaries of which are exclusively the undersigned or members of the undersigned's immediate family, (b) as a bona fide gift or gifts to a charity or educational institution, (c) to a spouse, former spouse, child or other dependent pursuant to a domestic relations or similar order of a court of competent jurisdiction, or (d) if the undersigned is or was an officer, director or employee of the Company, to the Company pursuant to the Company's right of repurchase upon termination of the undersigned's service with the Company,

(2) if the undersigned is a partnership or a limited liability company, to a partner or member, as the case may be, of such partnership or limited liability company if, in any such case, such transfer is not for value,

(3) to any affiliate, as defined in Rule 405 under the Securities Act of 1933, as amended (the "1933 Act"), of the undersigned, including investment funds or other entities under common control or management that are affiliates of the undersigned,

(4) to the Company in satisfaction of any tax withholding obligation, and

(5) acquired in open market transactions after the completion of the offering contemplated by this agreement,

provided, however, that (A) in the case of any transfer described in clauses (1) through (3) above, it shall be a condition to the transfer that the transferee executes and delivers to the Representatives, acting on behalf of the Underwriters, not later than one business day prior to such transfer, a written agreement, in substantially the form of this agreement (it being understood that any references to "immediate family" in the agreement executed by such transferee shall expressly refer only to the immediate family of the undersigned and not to the immediate family of the transferee) and otherwise satisfactory in form and substance to the Representatives, (B) in the case of a transfer pursuant to clause (1) above, if the undersigned is required to file a report under Section 16(a) of the 1934 Act, reporting a reduction in beneficial ownership of shares of Common Stock or other capital stock or any securities convertible into or exercisable or exchangeable for Common Stock or other capital stock by the undersigned during the Lock-Up Period, the undersigned shall include a statement in such report to the effect that such transfer is not a transfer for value and that such transfer is being made as a gift, by will or intestate succession or pursuant to a so-called "living trust" or other revocable trust established to provide for the disposition of property on the undersigned's death, or by court order, as the case may be, (C) in the case of a transfer pursuant to clauses (2) through (5) above, no filing under Section 16(a) of the 1934 Act reporting a reduction in beneficial ownership of shares of Common Stock or other capital stock or any securities convertible into or exercisable or exchangeable for Common Stock or other capital stock shall be required to be made or shall be voluntarily made during the Lock-Up Period and (D) in the case of a transfer pursuant to clauses (1) through (5) above, no voluntary filing with the Securities and Exchange Commission or other public report, filing or announcement shall be made in respect of such transfer during this Lock-Up Period. For purposes of this paragraph, "immediate family" shall mean any relationship by blood, marriage or adoption not more remote than the first cousin.

In addition, notwithstanding the lock-up restrictions described herein, the undersigned may at any time after the date hereof (1) exercise any options or warrants to purchase Common Stock or other capital stock

(including by cashless exercise to the extent permitted by the instruments representing such options or warrants so long as such cashless exercise is effected solely by the surrender of outstanding options or warrants to the Company and the Company's cancellation of all or a portion thereof to pay the exercise price); provided, however, that in any such case the securities issued upon exercise shall remain subject to the provisions of this letter agreement, or (2) enter into a trading plan (a "New Plan") meeting the requirements of Rule 10b5-1 under the 1934 Act relating to the sale of Common Stock or other capital stock if then permitted by the Company and applicable law; provided that (A) the securities subject to such New Plan may not be sold during the Lock-Up Period, and (B) the entry into the New Plan is not publicly announced or disclosed.

The undersigned further agrees that (i) it will not, during the Lock-Up Period, make any demand for or exercise any right with respect to the registration under the 1933 Act of any shares of Common Stock or other capital stock or any securities convertible into or exercisable or exchangeable for Common Stock or other capital stock, and (ii) the Company may, with respect to any Common Stock or other capital stock or any securities convertible into or exercisable or exchangeable for Common Stock or other capital stock owned or held (of record or beneficially) by the undersigned, cause the transfer agent or other registrar to enter stop transfer instructions and implement stop transfer procedures with respect to such securities during the Lock-Up Period.

The undersigned hereby waives any and all notice requirements and rights with respect to the registration of any securities pursuant to any agreement, instrument, understanding or otherwise, including any registration rights agreement or similar agreement, to which the undersigned is a party or under which the undersigned is entitled to any right or benefit and any tag-along rights, co-sale rights or other rights to have any securities (debt or equity) included in the offering contemplated by this agreement or sold in connection with the sale of Securities pursuant to the Underwriting Agreement, provided that such waiver shall apply only to the public offering of Common Stock pursuant to the Underwriting Agreement and each registration statement filed under the 1933 Act in connection therewith.

If the undersigned is an officer or director of the Company, (1) the Representatives 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 or other securities, they will notify the Company of the impending release or waiver, and (2) the Company has agreed in the Underwriting Agreement to announce the impending release or waiver by press release through a major news service at least two business days before the effective date of the release or waiver. Any release or waiver granted by the Representatives 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 agreement to the extent and for the duration that such terms remain in effect at the time of the transfer. The undersigned acknowledges and agrees that the Representatives may elect whether or not to grant any such release or waiver in their sole and absolute discretion.

The undersigned hereby represents and warrants that the undersigned has full power and authority to enter into this agreement and that this agreement has been duly authorized (if applicable), executed and delivered by the undersigned and is a valid and binding agreement of the undersigned. This agreement and all authority herein conferred are irrevocable and shall survive the death or incapacity of the undersigned (if a natural person) and shall be binding upon the heirs, personal representatives, successors and assigns of the undersigned.

It is understood that, if (i) the Company notifies the Representatives in writing that it does not intend to proceed with the offering of the Common Stock, (ii) if the Underwriting Agreement is not executed by March 31, 2015; provided, however, that the Company may, by prior written notice to the undersigned extend such date for a period of up to an additional three months after March 31, 2015, or (iii) if the Underwriting Agreement (other than the provisions thereof which survive termination) shall, pursuant to its terms, terminate or be terminated for any reason prior to payment for and delivery of the shares of Common Stock to be sold thereunder (other than any shares issuable upon exercise of the option granted to the Underwriters), this agreement shall immediately be terminated and the undersigned shall automatically be released from all of its obligations under this agreement.

The undersigned acknowledges and agrees that whether or not any public offering of Common Stock actually occurs depends on a number of factors, including market conditions.

THE AGREEMENT SHALL BE GOVERNED BY AND CONSTRUED IN ACCORDANCE WITH THE LAWS OF THE STATE OF NEW YORK.

[Signature Page Immediately Follows]

IN WITNESS WHEREOF, the undersigned has executed and delivered this agreement as of the date first set forth above.

Yours very truly,

_____

Signature

_____

Printed Name of Person Signing

(Indicate capacity of person signing if signing as custodian or trustee, or on behalf of an entity)

PRICE-RELATED INFORMATION

Public offering price: $[·] per share

Initial Securities: [·] shares

Common Stock to be sold in the Concurrent Private Placement: [·] shares

Net proceeds, before expenses, to the Company: $[·] per share

Settlement date: [·]

EXHIBIT E

ISSUER GENERAL USE FREE WRITING PROSPECTUSES

[·]

Exhibit 3.1.1

CERTIFICATE OF AMENDMENT
TO
RESTATED CERTIFICATE OF INCORPORATION
OF
TRACON PHARMACEUTICALS, INC.

TRACON Pharmaceuticals, Inc. (the "***Company***"), a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "***DGCL***"), does hereby certify that:

FIRST: The name of the Company is TRACON Pharmaceuticals, Inc.

SECOND: The date on which the Company's Certificate of Incorporation was originally filed with the Secretary of State of the State of Delaware was October 28, 2004.

THIRD: The Board of Directors of the Company, acting in accordance with the provisions of Sections 141 and 242 of the DGCL, adopted resolutions deeming advisable and approving an amendment to the Company's Restated Certificate of Incorporation (the "***Restated Certificate***") as follows:

1. The first paragraph of Article IV of the Restated Certificate is hereby amended to add the following at the end of such paragraph:

"Effective at the time of filing of this Certificate of Amendment with the Secretary of State of the State of Delaware, every 3.87 shares of Common Stock issued and outstanding shall, automatically and without any action on the part of the respective holders thereof, be combined and converted into one share of Common Stock without increasing or decreasing the par value of each share of Common Stock (the "***Reverse Split***"); *provided*, *however*, that the Company shall issue no fractional shares of Common Stock as a result of the Reverse Split, but shall instead pay to any stockholder who would be entitled to receive a fractional share as a result of the actions set forth herein a sum in cash equal to the fair market value of the shares constituting such fractional share as determined by the Board of Directors of the Company. The Reverse Split shall occur whether or not the certificates representing such shares of Common Stock are surrendered to the Company or its transfer agent. The Reverse Split shall be effected on a record holder-by-record holder basis, such that any fractional shares of Common Stock resulting from the Reverse Split and held by a single record holder shall be aggregated."

FOURTH: Thereafter, pursuant to a resolution of the Board of Directors, this Certificate of Amendment was submitted to the stockholders of the Company for their approval, and was duly adopted in accordance with the provisions of Sections 228 and 242 of the DGCL.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, TRACON Pharmaceuticals, Inc., has caused this Certificate of Amendment to be executed by its duly authorized officer as of January 16, 2015.

/s/ Charles P. Theuer, M.D., Ph.D.
Charles P. Theuer, M.D., Ph.D.
President and Chief Executive Officer

AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION OF
TRACON PHARMACEUTICALS, INC.

TRACON Pharmaceuticals, Inc., a corporation organized and existing under the laws of the State of Delaware, hereby certifies as follows:

FIRST: The name of this corporation is TRACON Pharmaceuticals, Inc.

SECOND: This corporation's Certificate of Incorporation was originally filed with the Secretary of State of the State of Delaware on October 28, 2004 under the name of Lexington Pharmaceuticals, Inc.

THIRD: The Certificate of Incorporation of said corporation shall be amended and restated to read in full as follows:

I.

The name of this corporation is TRACON Pharmaceuticals, Inc. (the "***Company***").

II.

The address of the registered office of the Company in the State of Delaware is 2711 Centerville Road, Suite 400, City of Wilmington, County of New Castle, Delaware, 19801 and the name of the registered agent of the Company in the State of Delaware at such address is Corporation Service Company.

III.

The purpose of the Company is to engage in any lawful act or activity for which a corporation may be organized under the Delaware General Corporation Law (the "***DGCL***").

IV.

A. The 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 210,000,000 shares. 200,000,000 shares shall be Common Stock, each having a par value of $0.001. 10,000,000 shares shall be Preferred Stock, each having a par value of $0.001.

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 any or all of the unissued and undesignated 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 Company 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 Company 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 (this "***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 of Preferred Stock are entitled, either separately or together as a class with the holders of one or more other series of Preferred Stock, to vote thereon by law or pursuant to this 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. 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 that 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. Subject to the rights of the holders of any series of Preferred Stock to elect additional directors under specified circumstances, 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 initial classification of the Board of Directors, 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 such initial classification, 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 such initial classification, 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 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. Subject to the rights of any series of Preferred Stock that may be designated from time to time to elect additional directors under specified circumstances, neither the Board of Directors nor any individual director may be removed without cause. 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 66 2/3% of the voting power of all then-outstanding shares of capital stock of the Company entitled to vote generally at an election of directors, voting together as a single class.

D. Subject to the rights of the holders of any series of Preferred Stock that may be designated from time to time, 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, except as otherwise provided by 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. Subject to the rights of the holders of any series of Preferred Stock that may be designated from time to time, the Board of Directors is expressly empowered to adopt, amend or repeal the Amended and Restated Bylaws of the Company (the "***Bylaws***"). Any adoption, amendment or repeal of the Bylaws 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, subject to any restrictions which may be set forth in this Certificate of Incorporation (including any certificate of designation that may be filed from time to time); *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 Certificate of Incorporation, such action by stockholders shall require the affirmative vote of the holders of at least 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 at an election of directors, voting together as a single class.

F. The directors of the Company need not be elected by written ballot unless the Bylaws so provide.

G. 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. No action shall be taken by the stockholders of the Company by written consent or electronic transmission.

H. 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.

VI.

A. The liability of a director of the Company for monetary damages shall be eliminated to the fullest extent under applicable law. If the DGCL is amended to authorize corporate action further eliminating or limiting the personal liability of directors,

then the liability of a director of the Company shall be eliminated to the fullest extent permitted by the DGCL, as so amended.

B. Any repeal or modification of this Article VI shall be prospective and shall not affect the rights 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.

A. The Company reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, except as provided in Section B of this Article VII, and all rights conferred upon the stockholders herein are granted subject to this reservation.

B. Notwithstanding any other provisions of this 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 Certificate of Incorporation or any certificate of designation filed with respect to a series of Preferred Stock that may be designated from time to time, subject to the rights of the holders of any series of Preferred Stock, the affirmative vote of the holders of at least 66 2/3% of the voting power of all of the then-outstanding shares of capital stock of the Company entitled to vote generally at an election of directors, voting together as a single class, shall be required to alter, amend or repeal Articles V, VI or VII of this Certificate of Incorporation.

* * * *

FOURTH: This Certificate of Incorporation has been duly adopted and approved by the Board of Directors.

FIFTH: This Certificate of Incorporation has been duly adopted and approved by written consent of the stockholders in accordance with sections 228, 242 and 245 of the DGCL and written notice of such action has been given as provided in section 228 of the DGCL.

IN WITNESS WHEREOF, TRACON Pharmaceuticals, Inc. has caused this Amended and Restated Certificate of Incorporation to be signed by its President and Chief Executive Officer this ___ day of _____, 201_.

TRACON PHARMACEUTICALS, INC.

By: _____
Name: Charles P. Theuer, M.D., Ph.D.
Title: President and Chief Executive Officer

AMENDED AND RESTATED BYLAWS OF TRACON PHARMACEUTICALS, INC.

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 corporation's Board of Directors (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 (the "***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) of these Amended and Restated Bylaws (the "***Bylaws***"), who is entitled to vote at the meeting and who complied with the notice procedures set forth in this 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) of these Bylaws and must update and supplement such written notice on a timely basis as set forth in Section 5(c) of these Bylaws. 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) with respect to each nominee for election or re-election to the Board of Directors, include a completed and signed questionnaire, representation and agreement required by Section 5(e) of these Bylaws; 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) of these Bylaws. 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) of these Bylaws, and must update and supplement such written notice on a timely basis as set forth in Section 5(c) of these Bylaws. 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) of these Bylaws.

iii. To be timely, the written notice required by Section 5(b)(i) or 5(b)(ii) of these Bylaws must be received by the Secretary at the principal executive offices of the corporation not later than the close of business on the 90th day nor earlier than the close of business on the 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 30 days prior to or delayed by more than 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 120th day prior to such annual meeting and not later than the close of business on the later of the 90th day prior to such annual meeting or the 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) of these Bylaws 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) of these Bylaws) or to propose the business that is specified in the notice (with respect to a notice under Section 5(b)(ii) of these Bylaws); (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) of these Bylaws) or to carry such proposal (with respect to a notice under Section 5(b)(ii) of these Bylaws); (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 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 of these Bylaws, 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) of these Bylaws 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 business days prior to the meeting and, in the event of any adjournment or postponement thereof, five 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 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 business days prior to the date for the meeting, and, in the event of any adjournment or postponement thereof, two business days prior to such adjourned or postponed meeting.

(d) Notwithstanding anything in Section 5(b)(iii) of these Bylaws to the contrary, in the event that the number of directors in an Expiring Class (as defined below) 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 10 days before the last day a stockholder may deliver a notice of nomination in accordance with Section 5(b)(iii) of these Bylaws, a stockholder's notice required by this Section 5 and which complies with the requirements in Section 5(b)(i) of these Bylaws, other than the timing

requirements in Section 5(b)(iii) of these Bylaws, 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 10th day following the day on which such public announcement is first made by the corporation. For purposes of this Section 5, an "***Expiring Class***" shall mean a class of directors whose term shall expire at the next annual meeting of stockholders.

(e) To be eligible to be a nominee for election or re-election as a director of the corporation pursuant to a nomination under clause (iii) of Section 5(a) of these Bylaws, such proposed nominee or a person on such proposed nominee's behalf must deliver (in accordance with the time periods prescribed for delivery of notice under Section 5(b)(iii) or 5(d) of these Bylaws, as applicable) to the Secretary at the principal executive offices of the corporation a written questionnaire with respect to the background and qualification of such proposed nominee and the background of any other person or entity on whose behalf the nomination is being made (which questionnaire shall be provided by the Secretary upon written request) and a written representation and agreement (in the form provided by the Secretary upon written request) that such person: (i) is not and will not become a party to (A) any agreement, arrangement or understanding with, and has not given any commitment or assurance to, any person or entity as to how such person, if elected as a director of the corporation, will act or vote on any issue or question (a "***Voting Commitment***") that has not been disclosed to the corporation in the questionnaire or (B) any Voting Commitment that could limit or interfere with such person's ability to comply, if elected as a director of the corporation, with such person's fiduciary duties under applicable law; (ii) is not and will not become a party to any agreement, arrangement or understanding with any person or entity other than the corporation with respect to any direct or indirect compensation, reimbursement or indemnification in connection with service or action as a director of the corporation that has not been disclosed therein; and (iii) in such person's individual capacity and on behalf of any person or entity on whose behalf the nomination is being made, would be in compliance, if elected as a director of the corporation, and will comply with, all applicable publicly disclosed corporate governance, conflict of interest, confidentiality and stock ownership and trading policies and guidelines of the corporation.

(f) 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) of these Bylaws, or in accordance with clause (iii) of Section 5(a) of these Bylaws. Except as otherwise required by law, the chairman 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) of these Bylaws, 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.

(g) 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.

(h) For purposes of Sections 5 and 6 of these Bylaws,

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.

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 Chairman 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) of these Bylaws. 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 90th day prior to such meeting or the 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) of these Bylaws. 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 10 nor more than 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 deemed 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. If sent via electronic transmission, notice is deemed given as of the sending time recorded at the time of transmission. 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 corporation's Amended and Restated Certificate of Incorporation ("***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 chairman 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 chairman 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 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 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 or more persons, whether fiduciaries, members of a partnership, joint tenants, tenants in common, tenants by the entirety, or otherwise, or if two 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 votes, his act binds all; (b) if more than one votes, the act of the majority so voting binds all; or (c) if more than one 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 clause (c) of this Section 11 shall be a majority or even-split in interest.

Section 12. List of Stockholders. The Secretary shall prepare and make, at least 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 electronic transmission.

Section 14. Organization.

(a) At every meeting of stockholders, the Chairman of the Board of Directors, or, if a Chairman has not been appointed or is absent, the President, or, if the President is absent, a chairman of the meeting chosen by a majority in interest of the stockholders entitled to vote, present in person or by proxy, shall act as chairman. The Secretary, or, in his or her absence, an Assistant Secretary directed to do so by the President, 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 chairman 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 chairman, 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 chairman 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 chairman 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, the directors shall be divided into three classes designated as Class I, Class II and Class III, respectively. Initially, directors shall be assigned to each class in accordance with a resolution or resolutions adopted by the Board of Directors. At the first annual meeting of stockholders following the initial classification of the Board of Directors, 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 such initial classification, 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 such initial classification, 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.

(a) Unless otherwise provided in the Certificate of Incorporation, 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 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, it shall be deemed effective at the time of delivery 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 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 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.

Section 21. Duties of Chairman of the Board of Directors. The Chairman of the Board of Directors, when present, shall preside at all meetings of the stockholders and the Board of Directors. The Chairman 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 22. 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 Chairman of the Board, the Chief Executive Officer or a majority of the authorized number of 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 24 hours before the date and time of the meeting. If notice is sent by U.S. mail, it shall be sent by first class mail, charges prepaid, at least three 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 23. 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 of these Bylaws 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 24. 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 25. 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 26. Committees.

(a) Executive Committee. The Board of Directors may appoint an Executive Committee to consist of one 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 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 26, 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 26 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 27. Lead Independent Director. The Chairman of the Board of Directors, or if the Chairman is not an independent director, one of the independent directors, may be designated by the Board of Directors as lead independent director ("***Lead Independent Director***") to serve until replaced by the Board of Directors. The Lead Independent Director will: with the Chairman of the Board of Directors, establish the agenda for regular Board meetings and serve as chairman of Board of Directors meetings in the absence of the Chairman of the Board of Directors; establish the agenda for meetings of the independent directors; coordinate with the committee chairs regarding meeting agendas and informational requirements; preside over meetings of the independent directors; preside over any portions of meetings of the Board of Directors at which the evaluation or compensation of the Chief Executive Officer is presented or discussed; preside over any portions of meetings of the Board of Directors at which the performance of the Board of Directors is presented or discussed; and perform such other duties as may be established or delegated by the Chairman of the Board of Directors**.**

Section 28. Organization. At every meeting of the directors, the Chairman of the Board of Directors, or, if a Chairman has not been appointed or is absent, the Lead Independent Director, or if the Lead Independent Director 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 chairman 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 or director directed to do so by the Chairman, shall act as secretary of the meeting.

ARTICLE V

OFFICERS

Section 29. Officers Designated. The officers of the corporation shall include, if and when designated by the Board of Directors, the Chairman of 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 30. 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, unless the Chairman of the Board of Directors or the Lead Independent Director 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, unless the Chairman of the Board of Directors, the Lead Independent Director, 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. The Vice Presidents 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. The Vice Presidents 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 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 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 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 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 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 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 President shall designate from time to time.

Section 31. 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 32. 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 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 33. 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 34. 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 35. 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 Chairman of the Board of Directors, the Chief Executive Officer, the President, or any Vice President.

ARTICLE VII

SHARES OF STOCK

Section 36. 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 of the corporation, if any, shall be in such form as is consistent with the Certificate of Incorporation and applicable law. Every holder of stock represented by certificate in the corporation shall be entitled to have a certificate signed by or in the name of the corporation by the

Chairman of the Board of Directors, the Chief Executive Officer, or the President or any Vice President and by the Chief Financial Officer, 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 37. 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 38. 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 39. 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 60 nor less than 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 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 40. 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 41. Execution of Other Securities. All bonds, debentures and other corporate securities of the corporation, other than stock certificates (covered in Section 36 of these Bylaws), may be signed by the Chairman of the Board of Directors, the Chief Executive Officer, 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 42. 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 43. 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 44. Fiscal Year. The fiscal year of the corporation shall be fixed by resolution of the Board of Directors.

ARTICLE XI

INDEMNIFICATION

Section 45. Indemnification of Directors, Officers, Employees and Other Agents.

(a) Directors and Officers. The corporation shall indemnify its directors and officers 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 officers; and, *provided, further*, that the corporation shall not be required to indemnify any director or 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) Employees and Other Agents. The corporation shall have power to indemnify its 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 to indemnify any such employee or other agent to such officers or other persons as the Board of Directors so determines.

(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 officer, of the corporation, or is or was serving at the request of the corporation as a director or 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 officer in connection with such proceeding provided, however, that if the DGCL requires, an advancement of expenses incurred by a director or officer in his or her capacity as a director or 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, 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 that such indemnitee is not entitled to be indemnified for such expenses under this Section 45 or otherwise.

Notwithstanding the foregoing, unless otherwise determined pursuant to paragraph (e) of this Section 45, no advance shall be made by the corporation to an officer of the corporation (except by reason of the fact that such 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 officers under this Section 45 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 officer. Any right to indemnification or advances granted by this Section 45 to a director or 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 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 officer of the corporation (except in any action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that such 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 the officer or director 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 officer to enforce a right to indemnification or to an advancement of expenses hereunder, the burden of proving that the director or officer is not entitled to be indemnified, or to such advancement of expenses, under this Section 45 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 such person's 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 officer, or, if applicable, 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 45.

(h) Amendments. Any repeal or modification of this Section 45 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 officer to the full extent not prohibited by any applicable portion of this Section 45 that shall not have been invalidated, or by any other applicable law. If this Section 45 shall be invalid due to the application of the indemnification provisions of another jurisdiction, then the corporation shall indemnify each director and 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 45 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***," "***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, officer, employee, trustee or agent of another corporation, partnership, joint venture, trust or other enterprise.

v. References to "***other enterprise***" 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 such person 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 45.

ARTICLE XII

NOTICES

Section 46. Notices.

(a) Notice to Stockholders. Written notice to stockholders of stockholder meetings shall be given as provided in Section 7 of these Bylaws. 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 U.S. 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, or by overnight delivery service, facsimile, telex or telegram, except that such notice other than one which is delivered personally shall 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 post office 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 the DGCL, any notice given under the provisions of the 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 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 47. Amendments. 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, ho*wever,* 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 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 OR EMPLOYEES

Section 48. Loans to Officers or Employees. 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 49. 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 or officer of the corporation or the corporation's stockholders, (c) any action asserting a claim against the corporation arising pursuant to any provision of the DGCL or the corporation's Certificate of Incorporation or Bylaws, or (d) any action asserting a claim against the corporation 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 to have consented to the provisions of this Section 49.

Exhibit 4.1

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—	_____ Custodian _____ (Cust) (Minor) under Uniform Gifts to Minors Act _____ (State)
TEN ENT	– as tenants by the entireties		
JT TEN	– as joint tenants with right of survivorship and not as tenants in common		

Additional abbreviations may also be used though not in the above list.

For value received, _____ hereby sell(s), assign(s) and transfer(s) unto

PLEASE INSERT SOCIAL SECURITY OR OTHER IDENTIFYING NUMBER OF ASSIGNEE

_____

_____

(PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS, INCLUDING ZIP CODE, OF ASSIGNEE)

_____

_____

_____ Shares of the common stock of the Corporation represented by this Certificate and does hereby irrevocably constitute and appoint

_____ Attorney to transfer the said stock on the books of the within-named Corporation with full power of substitution in the premises.

Dated _____

X _____

X _____

NOTICE: THE SIGNATURE(S) TO THIS ASSIGNMENT MUST CORRESPOND WITH THE NAME(S) AS WRITTEN UPON THE FACE OF THE CERTIFICATE IN EVERY PARTICULAR, WITHOUT ALTERATION OR ENLARGEMENT OR ANY CHANGE WHATSOEVER.

SIGNATURE(S) GUARANTEED:

_____

THE SIGNATURE(S) MUST 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.

QuickLinks -- Click here to rapidly navigate through this document

Exhibit 5.1

Charles S. Kim
(858) 550 6049
ckim@cooley.com

January 20, 2015

TRACON Pharmaceuticals, Inc.
8910 University Center Lane, Suite 700
San Diego, California 92122

Ladies and Gentlemen:

You have requested our opinion, as counsel to TRACON Pharmaceuticals, Inc., a Delaware corporation (the "***Company***"), in connection with the filing by the Company of a Registration Statement (No. 333-201280) 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 4,140,000 shares (the "***Shares***") of the Company's common stock, par value $0.001, including up to 540,000 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 examined and relied upon the Registration Statement and Prospectus, the Company's Amended and Restated Certificate of Incorporation as amended, its Bylaws, as currently in effect, the forms of the Company's Amended and Restated Certificate of Incorporation and Amended and Restated Bylaws, filed as Exhibits 3.2 and 3.4, respectively, to the Registration Statement, each of which will be in effect upon the closing of the offering contemplated by the Registration Statement, and 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.

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. 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 in accordance with 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 and to the filing of this opinion as an exhibit to the Registration Statement.

Sincerely,

Cooley LLP

By: /s/ CHARLES S. KIM

Charles S. Kim

QuickLinks

TRACON PHARMACEUTICALS, INC.

2015 EQUITY INCENTIVE PLAN

ADOPTED BY THE BOARD OF DIRECTORS: JANUARY 1, 2015
APPROVED BY THE STOCKHOLDERS: [·], 2015
IPO DATE: [·], 2015

1. GENERAL.

(a) Successor to and Continuation of Prior Plan. The Plan is intended as the successor to the TRACON Pharmaceuticals, Inc. 2011 Equity Incentive Plan, as amended (the "***Prior Plan***"). From and after 12:01 a.m. Pacific time on the IPO Date, no additional stock awards will be granted under the Prior Plan. All Awards granted on or after 12:01 a.m. Pacific Time on the IPO Date will be granted under this Plan. All stock awards granted under the Prior Plan will remain subject to the terms of the Prior Plan.

(i) Any shares that would otherwise remain available for future grants under the Prior Plan as of 12:01 a.m. Pacific Time on the IPO Date (the "***Prior Plan's Available Reserve***") will cease to be available under the Prior Plan at such time. Instead, that number of shares of Common Stock equal to the Prior Plan's Available Reserve will be added to the Share Reserve (as further described in Section 3(a) below) and will be immediately available for grants and issuance pursuant to Stock Awards hereunder, up to the maximum number set forth in Section 3(a) below.

(ii) In addition, from and after 12:01 a.m. Pacific time on the IPO Date, any shares subject, at such time, to outstanding stock awards granted under the Prior Plan that (i) expire or terminate for any reason prior to exercise or settlement; (ii) are forfeited because of the failure to meet a contingency or condition required to vest such shares or otherwise return to the Company; or (iii) are reacquired, withheld (or not issued) to satisfy a tax withholding obligation in connection with an award or to satisfy the purchase price or exercise price of a stock award (such shares 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) below.

(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 grant 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 the time at which cash or shares of Common Stock may be issued in settlement thereof).

(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 the Participant's then-outstanding Award without the Participant's 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 bringing the Plan or Awards granted under the Plan into compliance with the requirements for Incentive Stock Options or ensuring that they are exempt from, or compliant with, the requirements for nonqualified deferred compensation under Section 409A of the Code, 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 reduces the price at which shares of

Common Stock may be issued or purchased under the Plan, (E) materially extends the term of the Plan, or (F) 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 a Participant's rights under an outstanding Award without the Participant's 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 Awards, including, but not limited to, amendments to provide terms more favorable to the Participant than previously provided in the Award Agreement, subject to any specified limits in the Plan that are not subject to Board discretion; *provided, however,* that a Participant's rights under any Award will not be impaired by any such amendment unless (A) the Company requests the consent of the affected Participant, and (B) such Participant consents in writing. Notwithstanding the foregoing, (1) a Participant's rights will not be deemed to have been impaired by any such amendment if the Board, in its sole discretion, determines that the amendment, taken as a whole, does not materially impair the Participant's rights, and (2) subject to the limitations of applicable law, if any, the Board may amend the terms of any one or more Awards without the affected Participant's consent (A) to maintain the qualified status of the Award as an Incentive Stock Option under Section 422 of the Code; (B) to change the terms of an Incentive Stock Option, if such change results in impairment of the Award solely because it impairs the qualified status of the Award as an Incentive Stock Option under Section 422 of the Code; (C) to clarify the manner of exemption from, or to bring the Award into compliance with, Section 409A of the Code; or (D) 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 participation in the Plan by Employees, Directors or Consultants who are foreign nationals or employed outside the United States (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).

(xi) To effect, with the consent of any adversely affected Participant, (A) the reduction of the exercise, purchase or strike price of any outstanding Stock Award; (B) the cancellation of any outstanding Stock Award and the grant in substitution therefor of a new (1) Option or SAR, (2) Restricted Stock Award, (3) Restricted Stock Unit Award, (4) Other Stock Award, (5) cash and/or (6) other valuable consideration determined by the Board, in its sole discretion, with any such substituted award (x) covering the same or a different number of shares of Common Stock as the cancelled Stock Award and (y) granted under the Plan or another equity

or compensatory plan of the Company; or (C) any other action that is treated as a repricing under generally accepted accounting principles.

(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 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 (1) 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 Awards, 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 pursuant to Section 13(w)(iii) 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 Section 3(a)(ii) regarding the annual increase, the aggregate number of shares of Common Stock that may be issued pursuant to Stock Awards will not exceed 1,863,621 shares (the "***Share Reserve***"), which number is the sum of (A) 801,033 new shares, *plus* (B) the number of shares

subject to the Prior Plan's Available Reserve, and *plus* (C) the number of shares that may become Returning Shares, as such shares become available from time to time.

(ii) In addition, the Share Reserve will automatically increase on January 1st of each year, for a period of not more than ten years from the date the Plan is approved by the stockholders of the Company, commencing on 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 in this Section 3(a) is a limitation on the number of shares of Common Stock that may be issued pursuant to the Plan. Accordingly, this Section 3(a) does not limit the granting of Stock Awards except as provided in Section 7(a).

(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 thereof (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 3,617,571 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, the following limitations shall apply.

(i) A maximum of 258,397 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. Notwithstanding

the foregoing, if any additional Options, SARs or 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 are granted to any Participant during any calendar year, compensation attributable to the exercise of such additional Stock Awards will not satisfy the requirements to be considered "qualified performance-based compensation" under Section 162(m) of the Code unless such additional Stock Award is approved by the Company's stockholders.

(ii) A maximum of 258,397 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).

(iii) A maximum of $1,000,000 may be granted as a Performance Cash Award to any one Participant during any one calendar year.

(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 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 used 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, 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, upon the death of the Participant, 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 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 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 (as applicable) within the applicable time frame, the Option or SAR will terminate.

(h) Extension of Termination Date. 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 time (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 on 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 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 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 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 (as applicable) 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 such Participant's termination of Continuous Service, and the Participant will be prohibited from exercising his or her Option or SAR from and after the time of such termination of Continuous Service.

(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 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 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 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 (including 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 Participant's 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) Board Discretion. 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 a 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.

(iv) 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 Performance Goals relate solely to the increase in the value of the Common Stock). Notwithstanding satisfaction of, or 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 (e.g., options or stock rights with an exercise price or strike price less than 100% of the Fair Market Value of the Common Stock at the time of grant) 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 such 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 such Participant 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; 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. 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 of the Code. 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 months following the date of such Participant's "separation from service" (as defined in Section 409A of the Code without regard to alternative definitions thereunder) 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 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.

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 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) make 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.

(d) 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.

(e) 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. PLAN TERM; EARLIER TERMINATION OR SUSPENSION OF THE PLAN.

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***"), or (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. 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, no 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 date the Plan is adopted by the Board.

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) "***Capital Stock***" means each and every class of common stock of the Company, regardless of the number of votes per share.

(f) "***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 nonrecurring 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 Statement of 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.

(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 means, with respect to a Participant, the occurrence of any of the following events: (i) such Participant's commission of any felony or any crime involving fraud, dishonesty or moral turpitude under the laws of the United States or any state thereof; (ii) such Participant's attempted commission of, or participation in, a fraud or act of dishonesty against the Company; (iii) such Participant's intentional, material violation of any contract or agreement between the Participant and the Company or of any statutory duty owed to the Company; (iv) such Participant's unauthorized use or disclosure of the Company's confidential information or trade secrets; or (v) such Participant's gross misconduct. The determination that a termination of the Participant's Continuous Service is either for Cause or without Cause shall be made by the Company in its sole discretion. Any determination by the Company that the Continuous Service of a Participant was terminated by reason of dismissal without Cause for the purposes of outstanding Stock Awards held by such Participant shall have no effect upon any determination of the rights or obligations of the Company or such Participant for any other purpose.

(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, (C) on account of the acquisition of securities of the Company by any individual who is, on the IPO Date, either an executive officer or a Director (either, an "***IPO Investor***") and/or any entity in which an IPO Investor has a direct or indirect interest (whether in the form of voting rights or participation in profits or capital contributions) of more than 50% (collectively, the "***IPO Entities***") or on account of the IPO Entities continuing to hold shares that come to represent more than 50% of the combined voting power of the Company's then outstanding securities 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; or (D) 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; *provided, however*, that a merger, consolidation or similar transaction will not constitute a Change in Control under this prong of the definition if the outstanding voting securities representing more than 50% of the combined voting power of the surviving Entity or its parent are owned by the IPO Entities;

(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 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; *provided, however*, that a sale, lease, exclusive license or other disposition of all or substantially all of the consolidated assets of the Company and its Subsidiaries will not constitute a Change in Control under this prong of the definition if the outstanding voting securities representing more than 50% of the combined voting power of the acquiring Entity or its parent are owned by the IPO Entities; 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.

Notwithstanding the foregoing definition or any other provision of the Plan, 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 and 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.

(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 TRACON Pharmaceuticals, 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.

(o) "***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.

If required for compliance with Section 409A of the Code, in no event will a Corporate Transaction 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).

(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) "***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.

(t) "***Entity***" means a corporation, partnership, limited liability company or other entity.

(u) "***Exchange Act***" means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

(v) "***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 IPO 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.

(w) "***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.

(x) "***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.

(y) "***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.

(z) "***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.

(aa) "***Nonstatutory Stock Option***" means any Option granted pursuant to Section 5 of the Plan that does not qualify as an Incentive Stock Option.

(bb) "***Officer***" means a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act.

(cc) "***Option***" means an Incentive Stock Option or a Nonstatutory Stock Option to purchase shares of Common Stock granted pursuant to the Plan.

(dd) "***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.

(ee) "***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.

(ff) "***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).

(gg) "***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.

(hh) "***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.

(ii) "***Own,***" "***Owned,***" "***Owner,***" "***Ownership***" means 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.

(jj) "***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.

(kk) "***Performance Cash Award***" means an award of cash granted pursuant to the terms and conditions of Section 6(c)(ii).

(ll) "***Performance Criteria***" means the one or more criteria that the Board 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 Board: (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) earnings before interest, taxes, depreciation, amortization, legal settlements, other income (expense), stock-based

compensation, other non-cash expenses and changes in deferred revenue; (ix) total stockholder return; (x) return on equity or average stockholder's equity; (xi) return on assets, investment, or capital employed; (xii) stock price; (xiii) margin (including gross margin); (xiv) income (before or after taxes); (xv) operating income; (xvi) operating income after taxes; (xvii) pre-tax profit; (xviii) operating cash flow; (xix) sales or revenue targets; (xx) increases in revenue or product revenue; (xxi) expenses and cost reduction goals; (xxii) improvement in or attainment of working capital levels; (xxiii) economic value added (or an equivalent metric); (xxiv) market share; (xxv) cash flow; (xxvi) cash flow per share; (xxvii) cash balance; (xxviii) cash burn; (xxix) cash collections; (xxx) share price performance; (xxxi) debt reduction; (xxxii) implementation or completion of projects or processes (including, without limitation, clinical trial initiation, new and supplemental indications for existing products, and product supply); (xxxiii) stockholders' equity; (xxxiv) capital expenditures; (xxxv) debt levels; (xxxvi) operating profit or net operating profit; (xxxvii) workforce diversity; (xxxviii) growth of net income or operating income; (xxxix) billings; (xl) bookings; (xli) employee retention; (xlii) initiation of phases of clinical trials and/or studies by specific dates; (xliii) acquisition of new customers, including institutional accounts; (xliv) customer retention and/or repeat order rate; (xlv) number of institutional customer accounts (xlvi) budget management; (xlvii) improvements in sample and test processing times; (xlviii) regulatory milestones; (xlix) progress of internal research or clinical programs; (l) progress of partnered programs; (li) partner satisfaction; (lii) milestones related to samples received and/or tests run; (liii) expansion of sales in additional geographies or markets; (liv) research progress, including the development of programs; (lv) patient samples processed and billed; (lvi) sample processing operating metrics (including, without limitation, failure rate maximums and reduction of repeat rates); (lvii) strategic partnerships or transactions (including in-licensing and out-licensing of intellectual property; and (lviii) and 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.

(mm) "***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 be 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; and (13) to exclude the effects of the timing of acceptance for review and/or approval of submissions to the U.S. Food and Drug Administration or any other regulatory body. 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.

(nn) "***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.

(oo) "***Performance Stock Award***" means a Stock Award granted under the terms and conditions of Section 6(c)(i).

(pp) "***Plan***" means this TRACON Pharmaceuticals, Inc. 2015 Equity Incentive Plan.

(qq) "***Restricted Stock Award***" means an award of shares of Common Stock which is granted pursuant to the terms and conditions of Section 6(a).

(rr) "***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.

(ss) "***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).

(tt) "***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.

(uu) "***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.

(vv) "***Securities Act***" means the Securities Act of 1933, as amended.

(ww) "***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.

(xx) "***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.

(yy) "***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.

(zz) "***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.

(aaa) "***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%.

(bbb) "***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 10% of the total combined voting power of all classes of stock of the Company or any Affiliate.

TRACON PHARMACEUTICALS, INC.
NON-EMPLOYEE DIRECTOR COMPENSATION POLICY

Each member of the Board of Directors (the "***Board***") who is not also serving as an employee of TRACON Pharmaceuticals, Inc. (the "***Company***") or any of its subsidiaries (each such member, a "***Non-Employee 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 Company's common stock (the "***IPO***").

The Director Compensation Policy will be effective upon the execution of the underwriting agreement in connection with the IPO (the "***Effective Date***"). The Director Compensation Policy may be amended at any time in the sole discretion of the Board or the Compensation Committee of the Board.

A Non-Employee Director may decline all or any portion of his or her compensation by giving notice to the Company prior to the date cash is to be paid or equity awards are to be granted, as the case may be.

Annual Cash Compensation

Commencing at the beginning of the first calendar quarter following the Effective Date, each Non-Employee Director will receive the cash compensation set forth below for service on the Board. The annual cash compensation amounts will be payable in equal quarterly installments, in arrears following the end of each quarter in which the service occurred, pro-rated for any partial months of service. All annual cash fees are vested upon payment.

1. Annual Board Service Retainer:
   a. All Eligible Directors: $35,000
   b. Chairman/Lead Independent Director (as applicable): $60,000 (in lieu of above)

2. 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 and Corporate Governance Committee: $3,750

3. Annual Committee Chair Service Retainer (in lieu of Committee Member Service Retainer):
   a. Chairman of the Audit Committee: $15,000
   b. Chairman of the Compensation Committee: $10,000
   c. Chairman of the Nominating and Corporate Governance Committee: $7,500

Equity Compensation

Equity awards will be granted under the Company's 2015 Equity Incentive Plan or any successor equity incentive plan (the "***Plan***"). All stock options granted under this policy will be Nonqualified Stock Options (as defined in the Plan), with a term of ten years from the date of grant and an exercise price per share equal to 100% of the Fair Market Value (as defined in the Plan) of the underlying common stock of the Company on the date of grant.

(a) Automatic Equity Grants.

(i) Initial Grant for New Directors. Without any further action of the Board, on the date of the Non-Employee Director's initial election to the Board (or, if such date is not a market trading day, the first market trading day thereafter), the Non-Employee Director will automatically be granted a Nonstatutory Stock Option to purchase a number of shares of common stock having an Option Value of $168,000 (the "***Initial Grant***"). In the discretion of the Board, the form of the Initial Grant in any given year may be a combination of the grant of a Nonstatutory Stock Option and a Restricted Stock Unit Award, which combination will have an aggregate value of $168,000. Each Initial Grant will vest in a series of 3 successive equal annual installments over the 3-year period measured from the date of grant.

(ii) Annual Grant. Without any further action of the Board, at the close of business on the date of each annual meeting of the Company's stockholders following the IPO, each person who is then a Non-Employee Director will automatically be granted a Nonstatutory Stock Option to purchase a number of shares of common stock having an Option Value of $100,000 (the "***Annual Grant***"). In the discretion of the Board, the form of the Annual Grant in any given year may be a combination of the grant of a Nonstatutory Stock Option and a Restricted Stock Unit Award, which combination will have an aggregate value of $100,000. Each Annual Grant will vest in full on the earlier of one-year anniversary of date of grant, or the date of the next annual meeting of the Company's stockholders.

(b) Vesting; Change in Control. All vesting is subject to the Non-Employee Director's "***Continuous Service***" (as defined in the Plan) on each applicable vesting date. Notwithstanding the foregoing vesting schedules, for each Non-Employee Director who

remains in Continuous Service with the Company until immediately prior to the closing of a "***Change in Control***" (as defined in the Plan), the shares subject to his or her then-outstanding equity awards that were granted pursuant to this policy will become fully vested immediately prior to the closing of such Change in Control.

(c) Calculation of Option Value and Value of a Restricted Stock Unit Award. The "***Option Value***" of a stock option to be granted under this policy will be determined using the same method the Company uses to calculate the grant-date fair value of stock options in its financial statements, except that no provision shall be made for estimated forfeitures related to service-based vesting. The value of a restricted stock unit award to be granted under this policy will be determined based on the Fair Market Value per share on the grant date (as defined in the Plan).

(d) Remaining Terms. The remaining terms and conditions of each stock option, including transferability, will be as set forth in the Company's standard Option Agreement, in the form adopted from time to time by the Board.

Expenses

The Company will reimburse Non-Employee Director for ordinary, necessary and reasonable out-of-pocket travel expenses to cover in-person attendance at and participation in Board and committee meetings; *provided*, that the Non-Employee Director 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.

Exhibit 10.11

*****Text Omitted and Filed Separately with the Securities and Exchange Commission. Confidential Treatment Requested Under 17 C.F.R. Sections 200.80(b)(4) and 230.406.**

LICENSE AGREEMENT

THIS LICENSE AGREEMENT (the ***"Agreement"***) is entered into as of March 3, 2014 (the ***"Effective Date"***) by and between **SANTEN PHARMACEUTICAL CO., LTD.**, a company organized under the laws of Japan (***"Santen"***) and **TRACON PHARMACEUTICALS, INC.**, a corporation organized under the laws of the State of Delaware (***"Tracon"***).

RECITALS

WHEREAS, Tracon has rights to the Antibody (as defined below) known as TRC105, currently being developed for oncology applications;

WHEREAS, Santen is engaged in the research, development and commercialization of pharmaceutical products; and

WHEREAS, Santen desires to obtain from Tracon, and Tracon desires to grant to Santen, an exclusive license under the Licensed Technology to develop and commercialize Products in the Field in the Territory (each as defined below), subject to the terms and conditions of this Agreement.

NOW, THEREFORE, in consideration of the foregoing premises and the mutual covenants herein contained, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Tracon and Santen hereby agree as follows:

1. DEFINITIONS

1.1 "Affiliate" shall mean any company or entity controlled by, controlling, or under common control with a Party or another entity. For the purpose of this definition, an entity shall be deemed to ***"control"*** another entity, if it owns directly or indirectly, more than fifty percent (50%) of the outstanding voting securities, capital stock, or other comparable equity or ownership interest of such entity, or exercises equivalent influence over such entity.

1.2 "Alternate Compound" shall mean the […***…] version of TRC105 or any fragment, modification or variant of TRC105 that is developed as an alternative, or in addition, to TRC105.

1.3 "Alternate Product" shall mean any pharmaceutical product that comprises or contains any Licensed Form of an Alternate Compound, including any such product that is incorporated into a Delivery Device, alone or in combination with one or more other active ingredient(s), whether packaged together or in the same therapeutic formulation.

1.4 "Antibody" means a molecule or the gene encoding such a molecule comprising or containing at least one immunoglobulin variable domain or parts of such domain.

1.5 "Applicable Laws" shall mean the applicable provisions of any and all national, supranational, regional, state and local laws, treaties, statutes, rules, regulations, administrative codes, guidance, ordinances, judgments, decrees, directives, injunctions, orders, permits (including Regulatory Approvals) of or from any court, arbitrator, Regulatory Authority or

governmental agency or authority having jurisdiction over or related to the subject item or subject person, including the FCPA, Export Control Laws and other comparable laws.

1.6 "Bankruptcy Laws" shall have the meaning provided in Section 9.5.

1.7 "Base Sales" shall have the meaning provided in Section 4.3(b)(ii).

1.8 "BLA" shall mean a biologics license application as described in 21 CFR Part 601, *et seq.* (and any amended or successor regulations), including all amendments and supplements thereto, that is filed with the FDA in order to gain the FDA's approval to market a Product in the U.S.

1.9 "Business Day" shall mean any day that is not a Saturday, a Sunday or other day on which banks are required or authorized by law to close in the State of California, U.S. or Japan.

1.10 "Change of Control" shall mean either: (a) a sale of all or substantially all of the assets of Tracon, including but not limited to those relating to anti-endoglin Antibody, in one or a series of integrated transactions not in the ordinary course of business to a Third Party; or (b) the acquisition of Tracon by a Third Party by means of any transaction or series of related transactions (including, any stock acquisition, merger or consolidation); in either case, in which transaction or series of transactions the holders of outstanding voting securities of Tracon immediately prior to such transaction do not beneficially own, directly or indirectly, at least fifty (50) % of the combined outstanding voting power of the acquiring entity (or of Tracon if it is the surviving entity in such transaction described in subsection (b)), or its direct or indirect parent entity, immediately after such transaction or series of related transactions.

1.11 "Co-Promotion Right" shall have the meaning provided in Section 3.8.

1.12 "Combination Product" shall mean any Product that contains or comprises both (a) any Compound, and (b) at least one other active ingredient(s), whether packaged together or in the same therapeutic formulation.

1.13 "Commercial Launch" shall mean the first sale by Santen, its Affiliate or Sublicensee to a Third Party for end use or consumption of a Product in a country in the Territory after the governing Regulatory Authority of such country has granted Regulatory Approval of such Product. For the avoidance of doubt, any sale of a Product for compassionate use, named patient use, clinical trial purposes or other similar uses will not constitute a Commercial Launch.

1.14 "Commercially Reasonable Efforts" shall mean that level of efforts and resources consistent with commercially reasonable practices of a similarly situated specialty pharmaceutical company to perform any activity for a compound or product at a similar stage of research, development or commercialization, taking into account measures of patent coverage, relative safety and efficacy, product profile, the competitiveness of the marketplace, the proprietary position of such compound or product, the regulatory structure involved, the market potential of such compound or product, industrial standard in manufacturing and supplying

pharmaceutical products and its components, and other relevant factors, including comparative technical, legal, scientific or medical factors.

1.15 "Competing Product" shall mean a pharmaceutical product containing either (a) the Compound or (b) an Antibody (other than the Compound) having […***…], in either case of clause (a) or (b) with or without one or more other active ingredients, which pharmaceutical product is marketed by a party other than Santen or its Affiliates or Sublicensees, and used in the Field

1.16 "Compound" shall mean (a) TRC105, or (b) any Alternate Compound.

1.17 "Compound Manufacturing IP" shall mean all Information and Patents Controlled by Tracon or its Affiliates as of the Effective Date or during the Term that relate to the manufacture of any Compound, excluding […***…]. Notwithstanding the foregoing, Compound Manufacturing IP shall not include any Information or Patents Controlled by any acquirer of Tracon, or any Affiliate of such acquirer, except for any Information or Patents that are developed by such acquirer or Affiliate through use of Information or Patents that relate to the manufacture of any Compound Controlled by Tracon or its Affiliates (excluding such acquirer or its Affiliates).

1.18 "Compound Manufacturing Patents" shall mean the Patents included in the Compound Manufacturing IP.

1.19 "Confidential Information" shall mean all Information and other proprietary scientific, marketing, financial or commercial information or data, which is generated by or on behalf of a Party or its Affiliates and which one Party or any of its Affiliates has furnished or made available to the other Party or its Affiliates, whether in oral, written or electronic form.

1.20 "Control" (including any variations such as "**Controlled**" and "**Controlling**") shall mean, with respect to any Information, Patents or other intellectual property rights, possession by a Party or Third Party of the right, power and authority (whether by ownership, license or otherwise, other than by virtue of any rights granted under this Agreement) to grant access to, to grant use of, or to grant a license or a sublicense to such Information, Patents or intellectual property rights without violating the terms of any agreement or other arrangement with any Third Party

1.21 "Delivery Device" shall mean any device for the delivery of a product in the Field (excluding syringes or other similar devices that are generally available for purchase).

1.22 "Development Plan" shall have the meaning provided in Section 3.1(b).

1.23 "Disclosing Party" shall have the meaning provided in Section 6.1.

1.24 "Dispute" shall have the meaning provided in Section 11.1.

1.25 "EMA" shall mean the European Medicines Agency and any successor entity thereto.

***Confidential Treatment Requested

1.26 "EU" shall mean the European Union.

1.27 "Export Control Laws" shall mean all applicable U.S. laws and regulations relating to (a) sanctions and embargoes imposed by the Office of Foreign Assets Control of the U.S. Department of Treasury or (b) the export or re-export of commodities, technologies, or services, including the Export Administration Act of 1979, 24 U.S.C. §§ 2401-2420, the International Emergency Economic Powers Act, 50 U.S.C. §§ 1701-1706, the Trading with the Enemy Act, 50 U.S.C. §§ 1 et. seq., the Arms Export Control Act, 22 U.S.C. §§ 2778 and 2779, and the International Boycott Provisions of Section 999 of the U.S. Internal Revenue Code of 1986 (as amended).

1.28 "FCPA" shall mean the U.S. Foreign Corrupt Practices Act (15 U.S.C. Section 78dd-1, et. seq.) as amended.

1.29 "FDA" shall mean the U.S. Food and Drug Administration and any successor entity thereto.

1.30 "Field" shall mean the treatment, amelioration, mitigation or prevention of diseases or conditions of the eyes, excluding systemic treatment of cancers of the eye (ocular tumors).

1.31 "First Product" shall have the meaning provided in Section 4.3(e).

1.32 "GAAP" shall mean generally accepted accounting principles in the U.S., or internationally, as appropriate, consistently applied and shall mean the international financial reporting standards (**"IFRS"**) if a Party uses IFRS.

1.33 "ICC" shall have the meaning provided in Section 11.2(a).

1.34 "IND" shall mean an investigational new drug application, clinical study application, clinical trial exemption, or similar application or submission for approval to conduct human clinical investigations filed with or submitted to a Regulatory Authority in conformance with the requirements of such Regulatory Authority, including any such application filed with the FDA pursuant to 21 CFR Part 312.

1.35 "IND Filing Date" shall have the meaning provided in Section 3.7(a).

1.36 "IND Milestone" shall have the meaning provided in Section 4.2(a).

1.37 "Indemnitee" shall have the meaning provided in Section 10.3.

1.38 "Indemnitor" shall have the meaning provided in Section 10.3.

1.39 "Information" shall mean tangible and intangible techniques, technology, practices, trade secrets, inventions (whether patentable or not), processes, formulations, compounds, products, biological materials, cell lines (it being understood that any rights to use "Information" include the rights to use such cell lines), samples of assay components, media, designs, formulas, ideas, programs, software models, algorithms, developments, experimental

works, protocols, methods, knowledge, know-how, skill, experience, test data and results (including pharmacological, toxicological and non-clinical and clinical data and results), compilations of data, other works of analytical and quality control data, results, descriptions, compositions of matter, regulatory submissions, minutes, correspondence and strategy.

1.40 "Initial Product" shall mean any pharmaceutical product that comprises or contains any Licensed Form of TRC105, including any such product that is incorporated into a Delivery Device, alone or in combination with one or more active ingredient(s), whether packaged together or in the same therapeutic formulation.

1.41 "Initiation" shall mean, with respect to any Phase II Clinical Trial or Phase III Clinical Trial, the first enrollment of a human subject in the respective trial.

1.42 "JDC" shall have the meaning provided in Section 3.3(a).

1.43 "Joint Inventions" shall have the meaning provided in Section 8.1.

1.44 "Joint Patents" shall have the meaning provided in Section 8.1.

1.45 "License" shall mean the license granted under Section 2.1(a) and the sublicense granted under Section 2.1(b).

1.46 "Licensed Form" shall mean any and all dosage forms of a Compound in concentrations and quantities suitable for administration in and around the eyes, even if the same concentration is usable for other purposes. For clarity, Licensed Form excludes

any and all dosage forms of a Compound for administration through systemic delivery, including intravenous, subcutaneous, oral and pulmonary administration.

1.47 "Licensed Know-How" shall mean all Information with respect to any Compound or Product, which Information is Controlled by Tracon as of the Effective Date or by Tracon or any of its Affiliates during the Term and is necessary or useful for (a) the practice of the Licensed Patents, (b) preparing and prosecuting any IND or Regulatory Approval for the Licensed Form of any Compound or for any Product in the Field in the Territory, (c) the development of the Licensed Form of any Compound in the Field in the Territory or the use of the Licensed Form of any Compound in the development, manufacture, marketing, use or sale of any Product in the Field in the Territory, or (d) the development, manufacture, marketing, use or sale of any Product in the Field in the Territory, including all Information included in Compound Manufacturing IP, but excluding all Information […***…]. Notwithstanding the foregoing, Licensed Know-How shall not include any Information Controlled by any acquirer of Tracon, or any Affiliate of such acquirer, except for any Information that is developed by such acquirer or Affiliate through use of Licensed Technology Controlled by Tracon or its Affiliates (excluding such acquirer or its Affiliates). For clarification, Licensed Know-How does not include any Information, which relates to any active ingredient(s), other than a Compound, in any Combination Product.

1.48 "Licensed Patents" shall mean (a) all Patents set forth on ***Exhibit A-1***, ***A-2***, ***A-3*** and ***A-4***, and (b) all other Patents Controlled by Tracon (including by virtue of the license granted under the RPCI Agreement) or its Affiliates during the Term, which (i) claim the

composition of matter, manufacture or use in the Field of any Compound or Product or (ii) in the absence of a license or similar right, would be infringed (assuming issuance thereof in the case of any patent application) by (A) the development of the Licensed Form of any Compound in the Field in the Territory or the use of the Licensed Form of any Compound in the development, manufacture, marketing, use or sale of any Product in the Field in the Territory or (B) the development, manufacture, use, import, export, offering for sale or sale of any Product in the Field in the Territory, including all Patents included in Compound Manufacturing IP but excluding […***…]. Notwithstanding the foregoing, Licensed Patents shall not include any Patents Controlled by any acquirer of Tracon, or any Affiliate of such acquirer, except for any Patents developed by such acquirer or Affiliate through use of Licensed Technology Controlled by Tracon or its Affiliates (excluding such acquirer or its Affiliates). Licensed Patents include Tracon's ownership interest in Joint Patents. For clarification, Licensed Patents do not include any Patents with respect to any active ingredient(s) in any Combination Product other than a Compound.

1.49 "Licensed Technology" shall mean the Licensed Know-How and Licensed Patents.

1.50 "Lonza" shall mean Lonza Sales AG, a company incorporated and registered in Switzerland, or its successor-in-interest to the Lonza Agreement.

1.51 "Lonza Agreement" shall mean that certain License Agreement, dated June 29, 2009, by and between Lonza and Tracon, as amended in accordance with its terms, attached as Exhibit 1.51.

1.52 "Losses" shall have the meaning provided in Section 10.1.

1.53 "MAA" shall mean an application for the authorization for marketing of a Product, including all amendments and supplements thereto, filed with any Regulatory Authority outside the U.S. (including any supranational agency such as the EMA), to gain approval to market a Product in a given country or group of countries outside the U.S.

1.54 "Net Sales" shall mean the gross amounts invoiced for sales or other dispositions of Products by or on behalf of Santen or any of its Affiliates or Sublicensees (each, a **"Selling Party"**) to Third Parties (other than Sublicensees), less deductions […***…] by the Selling Party using GAAP applied on a consistent basis for:

(a) […***…];

(b) […***…];

(c) […***…];

(d) […***…];

(e) […***…], and

(f) […***…].

In no event shall any particular amount, identified above, be deducted more than once in calculating Net Sales (i.e., no "double counting" of reductions). Sales of Products […***…] shall be excluded from the computation of Net Sales, provided that the […***…] are included in the computation of Net Sales. Sale, disposal or use of Products for […***…], shall not be deemed a sale hereunder.

In the event that a Product is sold in the form of a Combination Product, Net Sales of the Combination Product shall be determined by multiplying actual Net Sales of the Combination Product (determined by reference to the definition of Net Sales set forth above) during the applicable calendar quarter by the fraction […***…] where A is the […***…], and B is the […***…], in each case during the applicable reporting calendar quarter in the country in which the sale of the Combination Product was made, or if sales of both the Product and the other active ingredient(s) did not occur in such period, then in the most recent calendar quarter in which sales of both occurred. If the other active ingredient(s) in the Combination Product is not sold separately in said country, Net Sales of the Combination Product shall be determined by multiplying actual Net Sales of such Combination Product (determined by reference to the definition of Net Sales set forth above) during the applicable calendar quarter by the fraction […***…], where A is the […***…], and D is the […***…]. If neither the Product nor the other active ingredient(s) in the Combination Product is sold separately in a given country, the Parties shall determine Net Sales for such Combination Product by mutual agreement based on the relative contribution of the Product and the other active ingredient(s) in the Combination Product.

In the event that a Product is sold together with a Delivery Device for a single sale price, Net Sales of such Product shall be determined by […***…]. If the Delivery Device is not sold separately in a given country, the Parties shall determine Net Sales for such Product sold together with a Delivery Device by mutual agreement based on the relative contribution of the Product and the Delivery Device to the final aggregate value of the Product and Delivery Device sold together. In no event will less than […***…] percent ([…***…]%) of the total amounts invoiced for a Product and Delivery Device sold together be allocated to the Product. For the avoidance of doubt, with

respect to the Combination Product sold together with a Delivery Device for a single sale price, the preceding paragraph shall further apply to determine Net Sales thereof.

1.55 "Nondisclosure Agreement" shall mean the Mutual Confidentiality Agreement between the Parties dated December 14, 2011.

1.56 "Party" shall mean Santen or Tracon individually, and "**Parties**" shall mean Santen and Tracon collectively.

1.57 "Patents" shall mean patents and patent applications, including provisional applications, continuations, continuations-in-part, continued prosecution applications, divisions, substitutions, reissues, additions, renewals, reexaminations, extensions, term restorations, confirmations, registrations, revalidations, revisions, priority rights, requests for continued examination and supplementary protection certificates granted in relation thereto, as well as utility models, innovation patents, petty patents, patents of addition, inventor's certificates, and equivalents in any country or jurisdiction.

1.58 "Phase I Clinical Trial" shall mean a study in humans which provides for the first introduction into humans of a Product, conducted in normal volunteers or patients to generate information on product safety, tolerability, pharmacological activity or pharmacokinetics, as more fully defined in 21 CFR §312.21(a) or comparable regulations in any country or jurisdiction outside the U.S. (and any amended or successor regulations).

1.59 "Phase II Clinical Trial" shall mean a human clinical trial, the principal purpose of which is to gather an initial assessment of safety and efficacy of one or more particular doses in patients being studied, as more fully defined in 21 C.F.R. §312(b) or comparable regulations in any country or jurisdiction outside the U.S. (and any amended or successor regulations).

1.60 "Phase III Clinical Trial" shall mean a human clinical trial, the principal purpose of which is to gather safety and efficacy data of one or more particular doses in patients being studied that is needed to evaluate the overall benefit and risk relationship of the product and to provide adequate basis for labeling, as more fully defined in 21 C.F.R. §312(c) or comparable regulations in any country or jurisdiction outside the U.S. (and any amended or successor regulations).

1.61 "Phase III Costs" shall have the meaning provided in Section 3.8.

1.62 "PMDA" shall mean the Japanese Pharmaceuticals and Medical Devices Agency and any successor entity thereto.

1.63 "Primary Detail" shall have the meaning provided in Section 3.8(b).

1.64 "Product" shall mean the Initial Product or any Alternate Product.

1.65 "Receiving Party" shall have the meaning provided in Section 6.1.

1.66 "Regulatory Approval" shall mean any and all approvals, licenses, permits, registrations or authorizations of or from any Regulatory Authority that are necessary to market and sell a pharmaceutical product in any country or other jurisdiction.

1.67 "Regulatory Authority" shall mean any country, federal, supranational, state or local regulatory agency, department, bureau or other governmental or regulatory authority having the administrative authority to regulate the development or marketing of pharmaceutical products in any country or other jurisdiction.

1.68 "Royalty Term" shall have the meaning provided in Section 4.3(e).

1.69 "RPCI Licensor" shall mean Roswell Park Cancer Institute and Health Research, Inc.

1.70 "RPCI Agreement" shall mean that certain Exclusive License Agreement, dated November 1, 2005, by and between RPCI Licensor and Tracon, as amended in accordance with its terms, attached as Exhibit 1.70.

1.71 "RPCI Patents" shall mean any Patents licensed to Tracon by RPCI Licensor under the RPCI Agreement, which (i) claim the composition of matter, manufacture or use in the Field of any Compound or Product or (ii) in the absence of a license or similar right, would be infringed (assuming issuance thereof in the case of any patent application) by (A) the development of the Licensed Form of any Compound in the Field in the Territory or the use of the Licensed Form of any Compound in the development, manufacture, marketing, use or sale of any Product in the Field in the Territory or (B) the development, manufacture, use, import, export, offering for sale or sale of any Product in the Field in the Territory, including, without limitation, as set forth on ***Exhibits A-1 and A-3*** attached hereto.

1.72 "Santen Fiscal Year" shall mean the twelve (12) month period from April 1 to March 31.

1.73 "Santen Indemnitees" shall have the meaning provided in Section 10.2.

1.74 "Santen Know-How" shall mean all Information relating to (a) the manufacture of any Compound, (b) the development of a Licensed Form of any Compound or the use of the Licensed Form of any Compound in the development, manufacture, marketing, use or sale of a Product, (c) the development, manufacture, marketing, use or sale of any Product, (d) the Santen Patents or (e) the preparation or prosecution of any IND or Regulatory Approval for the Licensed Form of any Compound or for any Product, which Information is Controlled by Santen or its Affiliates during the Term, including all such Information that is developed or generated in the course of development, manufacturing, regulatory or commercialization activities contemplated by this Agreement, provided however, that Santen Know-How shall not include any Information (i) relating to any Delivery Device, (ii) that is Controlled by Santen or its Affiliates prior to the Effective Date or is developed or generated by or on behalf of Santen or its Affiliates outside of the course of development, manufacturing, regulatory or commercialization activities contemplated by this Agreement and without use of any Licensed Technology, or (iii) relating to the use of any active pharmaceutical ingredient other than any Compound or of any excipient to manufacture, develop or use a Compound or a Product. If Santen or its Affiliate engages a Third

Party to perform development, manufacturing, regulatory or commercialization activities relating to any Compound or Product as contemplated by this Agreement, Santen and its Affiliates will use commercially reasonable efforts to obtain Control of Information developed or generated by such Third Party through such activities so that it is included in Santen Know-How.

1.75 "Santen Patents" shall mean all Patents Controlled by Santen or its Affiliates during the Term, which Patents claim the composition of matter, manufacture or use of any Compound or Product, including all Patents that claim any discovery or invention relating to (a) the manufacture of a Compound, (b) the development of a Licensed Form of a Compound or use of the Licensed Form of a Compound in the development, manufacturing, marketing, use or sale of a Product or (c) the development, manufacture, marketing, use or sale of a Product, provided however, that Santen Patents shall not include any Patents (i) relating to any Delivery Device, (ii) that are Controlled by Santen or its Affiliates prior to the Effective Date or that claim any discovery or invention developed or generated by or on behalf of Santen or its Affiliates outside of the course of development, manufacturing, regulatory or commercialization activities contemplated by this Agreement and without use of any Licensed Technology, or (iii) claiming the use of any active pharmaceutical ingredient other than a Compound or of any excipient to manufacture, develop or use a Compound or a Product. If Santen or its Affiliate engages a Third Party to perform development, manufacturing, regulatory or commercialization activities relating to any Compound or Product as contemplated by this Agreement, Santen and its Affiliates will use commercially reasonable efforts to obtain Control of Patents that claim any discovery or invention developed or generated by such Third Party through such activities so that they are included in Santen Patents. Santen Patents include Santen's ownership interest in Joint Patents.

1.76 "Santen Technology" shall mean the Santen Know-How and Santen Patents.

1.77 "SEC" shall have the meaning provided in Section 6.4(a).

1.78 "Section 365(n)" shall have the meaning provided in Section 9.5.

1.79 "Selected Sublicense Consideration" shall have the meaning provided in Section 4.4.

1.80 "Sublicensee" shall mean any Third Party to whom Santen has directly or indirectly granted a sublicense under all or any portion of the License.

1.81 "Subsequent Date" shall have the meaning provided in Section 2.3(c).

1.82 "Supply Agreement" shall have the meaning provided in Section 3.4.

1.83 "Term" shall have the meaning provided in Section 9.1.

1.84 "Terminated Countries" shall have the meaning provided in Section 9.2(e).

1.85 "Territory" shall mean all countries of the world.

1.86 "Third Party" shall mean any entity other than Santen and its Affiliates and Tracon and its Affiliates.

1.87 "Third Party Claims" shall have the meaning provided in Section 10.1.

1.88 "Tracon Product" shall mean any pharmaceutical product that comprises or contains any form of a Compound other than a Licensed Form of a Compound, alone or in combination with one or more active ingredient(s), whether packaged together or in the same therapeutic formulation.

1.89 "Tracon Indemnitees" shall have the meaning provided in Section 10.1.

1.90 "TRC105" shall mean the chimeric anti-endoglin Antibody known as TRC105, comprising the amino acid sequences set out in ***Exhibit B***.

1.91 "U.S." shall mean the United States of America and its territories and possessions.

1.92 "U.S. Diligence Obligation" shall have the meaning provided in Section 3.7(b).

1.93 "U.S. Percentage" shall have the meaning provided in Section 3.8(a).

1.94 "Valid Claim" shall mean a claim contained in (a) an issued and unexpired Patent, which claim has not been found to be unpatentable, invalid, revocable or unenforceable by a decision of a court or other authority of competent jurisdiction in the subject country, which decision is unappealable or unappealed within the time allowed for appeal, and has not been admitted to be invalid or unenforceable through abandonment, reissue, disclaimer or otherwise, or (b) a Patent application that has not been irretrievably cancelled, withdrawn, abandoned or rejected. A Patent application pending for more than […***…] years shall not be considered to have any Valid Claim for purposes of this Agreement unless and until a Patent with respect to such application issues with such claim.

1.95 "Withdrawal Notice" shall have the meaning provided in Section 3.3(f).

2. LICENSE

2.1 License Grant. Subject to the terms and conditions of this Agreement, Tracon hereby grants to Santen:

(a) during the Term, (i) an exclusive (even as to Tracon), royalty-bearing license under the Licensed Technology, other than the RPCI Patents and the Compound Manufacturing IP, solely to develop, make, have made, use, promote, sell, offer to sell, import and export Products in the Field in the Territory, and (ii) an exclusive (even as to Tracon), royalty-bearing license under the Compound Manufacturing IP, other than the RPCI Patents, solely to make and have made the Compound for use in the manufacture of Products for development and commercialization uses in the Field in the Territory, subject to the provisions of the Supply Agreement and **Exhibit D**; and

(b) during the Term (or, the term of the RPCI Agreement if such term ends prior to the Term), (i) an exclusive (even as to Tracon, subject to Section 2.2(a)), royalty-bearing sublicense under the RPCI Patents, other than the Compound Manufacturing Patents, solely to

***Confidential Treatment Requested

develop, make, have made, use, promote, sell, offer to sell, import and export Products in the Field in the Territory, and (ii) an exclusive (even as to Tracon, subject to Section 2.2(a)), royalty-bearing sublicense under the RPCI Patents included in the Compound

Manufacturing Patents (if any) solely to make and have made the Compound for use in the manufacture of Products for development and commercialization in the Field in the Territory, subject to the provisions of the Supply Agreement and **Exhibit D**.

Santen acknowledges that the License with respect to the RPCI Patents is subject to the applicable terms and conditions of the RPCI Agreement, and Santen shall comply, and shall cause any of its Affiliates or Sublicensees who are granted a sublicense under the License with respect to RPCI Patents to comply, with the applicable terms and conditions of the RPCI Agreement.

If Santen elects to have the Compound […***…], and Santen agrees to […***…] in manufacturing the Product for development and commercialization in the Field in the Territory under the terms of this Agreement.

Santen acknowledges that the License does not […***…], and that Santen may need to […***…]. In such event, Tracon shall use commercially reasonable efforts to […***…].

2.2 Sublicense Rights.

(a) Right to Sublicense. Subject to the terms and conditions of this Agreement, Santen shall have the right to grant sublicenses under the License (including, to the extent permitted under the RPCI Agreement, rights sublicensed to Santen under Section 2.1(b)) to (i) any Affiliates of Santen (which sublicenses shall permit the further grant of sublicenses, subject to Section 2.2(a)(ii) with respect to any further sublicense to a Third Party) or (ii) any Third Parties with whom Santen or its Affiliate has a binding written agreement to collaborate on the development and commercialization of Products in the Field in the Territory or the manufacture of Products or the Compound used in the manufacture of Products for use in development and commercialization in the Field in the Territory (which sublicense shall not permit the further grant of sublicenses). […***…], however, at Santen's written request, […***…]. Tracon acknowledges and agrees that Santen will control all aspects of the relationship with any Sublicensee, including, without limitation, the terms and conditions of the sublicense granted by

***Confidential Treatment Requested

Santen to such Sublicensee, provided that such sublicense shall comply with the requirements of this Agreement. Tracon agrees to use commercially reasonable efforts to […***…], within […***…] months of the Effective Date, to […***…].

(b) Sublicense Terms. Any sublicense granted by Santen under this Agreement (directly or indirectly through its Affiliate or […***…] shall be (i) in writing, (ii) subject and subordinate to, and consistent with, the terms and conditions of this Agreement and, with respect to the RPCI Patents, the RPCI Agreement, and (iii) provide that so long as a Sublicensee is in compliance with the sublicense agreement as of the date of termination of this Agreement and the termination of this Agreement was not caused by any act or omission on the part of the Sublicensee, […***…]. Santen shall provide Tracon with a copy of any sublicense agreement entered into with a Sublicensee, and any amendment thereto, within thirty (30) days of its execution […***…]). Santen shall be liable for the failure of its Affiliates and Sublicensees to comply with the relevant obligations under this Agreement and shall, at its own cost, enforce compliance by its Affiliates and Sublicensees with the terms of the sublicense agreement.

2.3 Negative Covenants, Other Antibody Products.

(a) Licensed Technology. Santen hereby covenants not to practice, and not to permit or cause any Affiliate, Sublicensee or other Third Party to practice, any Licensed Technology for any purpose except as expressly authorized in this Agreement. Tracon hereby covenants not to practice, and not to permit or cause any Affiliate, licensee or other Third Party to practice, any Santen Technology for any purpose other than as expressly authorized in this Agreement.

(b) Other Antibody Products.

(i) During the Term, Santen hereby covenants not to, itself or through any Affiliate or Third Party, develop, have developed, manufacture, have manufactured, sell, have sold or promote any product in the Field in the Territory that achieves its therapeutic result primarily through binding endoglin, other than Products. The Parties agree that, upon a Change of Control, the covenants set forth in this Section 2.3(b)(i) shall automatically terminate.

(ii) During the Term, Tracon hereby covenants not to, itself or through any Affiliate or Third Party, develop, have developed, manufacture, have manufactured, sell, have sold or promote any anti-angiogenic Antibody, including any Antibody that achieves its therapeutic result primarily through binding endoglin, and any product comprising or containing any such Antibody, in the Field. The grant of licenses and sublicenses by Tracon pursuant to Section 2.1 and 2.2 and Tracon's exercise of the Co-Promotion Right pursuant to Section 3.8 of this Agreement will not be considered a breach of the covenant in this Section 2.3(b). Notwithstanding the foregoing, Tracon shall have the right, itself and through Affiliates and

***Confidential Treatment Requested

Third Parties, to develop, have developed, manufacture, have manufactured, sell, have sold or promote any anti-angiogenic Antibody, including any Antibody that achieves its therapeutic result primarily through binding endoglin, and any products comprising or containing any such Antibody, including Compounds and Tracon Products, outside the Field, and any off-label use of any such products shall not be a violation of this Section 2.3(b) but shall be subject to Section 4.3(b). The Parties agree that upon a Change of Control, the covenants set forth in this Section 2.3(b)(ii) shall automatically terminate, and for avoidance of doubt, in no event will this Section 2.3(b)(ii) apply to any acquirer of Tracon or any Affiliate of such acquirer; provided that Section 4.3(b) shall apply with respect to any Competing Products sold by Tracon or its Affiliates after a Change of Control.

(c) Notice of Change of Control of Tracon. Tracon shall notify Santen of any Change of Control within twenty (20) days of such event. If, in such Change of Control, Tracon is acquired by an entity, which develops, manufactures, markets or sells […***…] on the effective date of such Change of Control, then the license granted by Santen to Tracon under Section 2.5 shall only include Santen Technology developed prior to the Change of Control (including all Patents arising in the course of prosecution or maintenance of Santen Patents existing as of such date) and not Santen Technology developed after the Change of Control. If the entity that acquired Tracon in such Change of Control develops, manufactures, markets or sells […***…] as of a date after the effective date of such Change of Control ("***Subsequent Date***"), then (i) such entity shall provide prompt written notice to Santen when it starts such development, manufacturing, marketing or sale, and (ii) the license granted by Santen to Tracon under Section 2.5 shall only include Santen Technology developed prior to the Subsequent Date (including all Patents arising in the course of prosecution or maintenance of Santen Patents existing as of the Subsequent Date) and not Santen Technology developed after the Subsequent Date.

2.4 No Implied Licenses; Retained Rights. No right or license under any Patents or Information of either Party is granted or shall be granted by implication. All such rights or licenses are or shall be granted only as expressly provided in the terms of this Agreement. Tracon hereby expressly reserves all rights under the Licensed Technology not expressly licensed to Santen in Section 2.1, including all rights with respect to Tracon Products, all rights outside the Field and all rights to make and have made Compounds for use for any purpose other than in the manufacture of Products in the Field for the Territory. With respect to the RPCI Patents, RPCI Licensor and the U.S. government have retained rights to use the RPCI Patents as provided in the RPCI Agreement. Santen hereby expressly reserves all rights under the Santen Technology not expressly licensed to Tracon in Section 2.5 (including the limitations set forth in Section 2.3(c)) and, except as set forth in Section 9.3(c)(i), all rights under the Santen Technology to manufacture Products or the Compound used in the manufacture of Products for use in development and commercialization of Products in the Field in the Territory.

2.5 Grant-Back License to Tracon. Subject to the terms and conditions of this Agreement including Section 2.3(c), Santen hereby grants to Tracon a non-exclusive, worldwide license, with the right to (a) sublicense to (and permit further sublicenses by) Tracon's other licensees (including Tracon's Affiliates) of Licensed Technology outside the Field who agree to grant Tracon a comparable license, with the right to sublicense to Santen (and permit further

sublicenses by Santen subject to Section 2.2), to Information, Patents or other intellectual property rights related to the Compound or Product under the Control of such licensee (if any) and (b) sublicense to (but not permit further sublicenses by) any Third Party contract manufacturer of Compounds and Tracon Products for Tracon and its Affiliates and licensees, under the Santen Technology solely to develop, make, have made, use, promote, sell, offer to sell, import and export Tracon Products outside the Field and to make and have made Compounds for use in the manufacture of Tracon Products for development and commercialization uses outside the Field. Such license shall be perpetual and irrevocable (except in the case of termination by Santen pursuant to Section 9.2(a), 9.2(b) or 9.2(c)) and shall be fully-paid and royalty-free unless Tracon's practice of such Santen Technology creates any payment obligation by Santen to a Third Party, in which case Tracon shall be liable for such payments unless Tracon advises Santen in writing that it does not want a license to the Santen Technology that would create such payment obligation to a Third Party. Tracon shall provide Santen with a copy of any such sublicense agreement, and any amendment thereto, within thirty (30) days of its execution (provided that Tracon may redact any confidential information contained therein that is not necessary to disclose to ensure compliance with this Agreement). Tracon shall be liable for the failure of its sublicensees to comply with the relevant obligations under this Agreement and shall, at its own cost, enforce compliance by its sublicensees with the terms of the sublicense agreement.

2.6 Technology Transfer.

(a) Documentation. During the thirty (30) day period following the Effective Date, Tracon, at its expense, shall provide to Santen one (1) electronic copy of documents, data or other information in Tracon's possession as of the Effective Date that describe or contain Licensed Know-How. Tracon shall provide and transfer to Santen in the same manner all additional information that describes or contains Licensed Know-How that may from time to time come into Tracon's possession and has not previously been provided to Santen (and in any event at least semi-annually).

(b) Access to Personnel. Upon Santen's request and prior written consent, Tracon shall provide Santen access to Tracon employees and consultants, and those of its contractors (including its contract manufacturers) and licensors, as reasonably necessary to assist in technology transfer to Santen or its contract manufacturer. Such assistance shall be provided remotely or on-site at Santen's or its contract manufacturer's facilities. Tracon by itself (including its consultants who perform such work for Tracon) shall provide up to a total of […***…] hours of such assistance free of charge, and Santen shall reimburse Tracon for assistance provided by itself (including its consultants who perform such work for Tracon) beyond such […***…] hours at a rate of […***…] U.S. dollars

(U.S.$ […***…]) per hour within thirty (30) days after receipt of an invoice therefor, such invoice to be issued by the tenth (10th) day of the month following the end of each calendar quarter.

(c) Research and Development Supplies. Tracon will supply Santen, without cost, with a reasonable quantity of biological materials and chemical reagents necessary for Santen's research and development of Product provided that such supply does not unreasonably interfere with Tracon's development and commercial activities. Materials requested by Santen in writing to be purchased from a Third Party will be reimbursed by Santen

within thirty (30) days after receipt of an invoice therefor, with reasonable additional supporting documentation as may be requested by Santen.

3. DEVELOPMENT, REGULATORY AND COMMERCIALIZATION MATTERS

3.1 Development.

(a) Conduct of Development Activities. Santen (itself and through its Affiliates and Sublicensees, as applicable) shall be solely responsible, at its own expense, for all development activities with respect to Products in the Field in the Territory.

(b) Development Plan. As of the Effective Date, the Parties have agreed to a written plan for development of Products in the Field in the U.S., Japan, United Kingdom, France and Germany by Santen (itself and through its Affiliates and Sublicensees, as applicable), including […***…] (such plan, as may be amended in accordance with this Section 3.1(b), the ***"Development Plan"***). Santen, at its own discretion, may amend the Development Plan from time to time after the Effective Date, depending on the progress of necessary development activities or for business reasons. Until […***…], Santen will provide Tracon a copy of any amendment to the Development Plan promptly, and in any event within thirty (30) days, after such amendment. Santen (itself and through its Affiliates and Sublicensees, as applicable) shall use Commercially Reasonable Efforts to develop Products in the Field in the Territory in accordance with the Development Plan.

3.2 Regulatory.

(a) Conduct of Regulatory Activities. Santen (itself and through its Affiliates and Sublicensees, as applicable) shall be solely responsible, at its own expense, for all regulatory activities with respect to the Products in the Field in the Territory, including formulating regulatory strategy and preparing, filing, obtaining and maintaining Regulatory Approvals for the Products in the Field in the Territory. Santen shall be the holder of all Regulatory Approvals for Products in the Field in the Territory and shall have responsibility for interactions with Regulatory Authorities with respect to the Products in the Field in the Territory. Santen shall keep Tracon regularly and fully informed of the preparation of, and Regulatory Authority review and approval of, submissions and communications with Regulatory Authorities with respect to the Products in the Field in the Territory. In addition, Santen shall promptly provide Tracon with copies of all material documents, information and correspondence received from a Regulatory Authority and upon reasonable request, with copies of any other documents, reports and communications from or to any Regulatory Authority relating to Compounds, Products or activities under this Agreement.

(b) Access to Regulatory Filings. Tracon hereby grants to Santen (and its Affiliates and Sublicensees, as applicable) the right to access and cross-reference filings made by Tracon or its Affiliates, by Tracon's licensors or suppliers (who have granted Tracon cross-

reference rights to their filings, which Tracon will use commercially reasonable efforts to obtain), and by licensees (who have agreed to reciprocal rights of reference for the benefit of Tracon, which Tracon will use commercially reasonable efforts to obtain) with Regulatory Authorities and Regulatory Approvals relating to Tracon Products (or Compounds included in Tracon Products) (including any drug master files) solely to the extent necessary in connection with regulatory activities with respect to Products in the Field in the Territory. Santen hereby grants to Tracon and its Affiliates and licensees (who have agreed to reciprocal rights of reference for the benefit of Santen, which Santen will use commercially reasonable efforts to obtain) the right to access and cross-reference filings made by Santen and its Affiliates and Sublicensees and by Santen's licensors or suppliers (who have granted Santen cross-reference rights to their filings, which Santen will use commercially reasonable efforts to obtain), with Regulatory Authorities and Regulatory Approvals relating to Products (or Compounds included in Products) (including any drug master files) solely to the extent necessary in connection with regulatory activities with respect to Tracon Products. Each Party shall, promptly upon request of the other Party, file with applicable Regulatory Authorities such letters of access or cross-reference as may be necessary to accomplish the intent of this Section 3.2(b).

(c) Safety Data Exchange. Within twelve (12) months following the Effective Date, but at the latest before the start of a clinical trial by Santen, the Parties shall negotiate in good faith and enter into a safety data exchange agreement regarding Compounds and Products and Tracon Products, which shall set forth standard operating procedures governing the collection, investigation, reporting, and exchange of information concerning adverse drug reactions/experiences sufficient to permit each Party to comply with its regulatory and other legal obligations within the applicable timeframes. Such safety data exchange agreement shall identify which Party shall be responsible for the timely reporting of all relevant adverse drug reactions/experiences, Product quality, Product complaints and safety data relating to Compounds and Products and Tracon Products to the appropriate Regulatory Authorities in the Territory in accordance with all Applicable Law. Such agreement shall allow each Party to comply with all regulatory and legal requirements regarding the management of safety data by providing for the exchange of relevant information in the appropriate format within applicable timeframes. Unless otherwise mutually agreed by the Parties, Tracon shall maintain a global safety database for Compounds and Tracon Products, and Santen shall maintain one or more safety database(s) for Products covering the entire world.

3.3 Governance

(a) Joint Development Committee. The Parties will form a joint development committee (the "***JDC***") to serve as a forum for information exchange and discussion with respect to development and regulatory activities relating to Compounds and Products in the Field in the Territory.

(b) Composition. The JDC will be comprised of an equal number of members appointed by each of Santen and Tracon, which members shall be employees of the applicable Party with appropriate experience and authority. Each Party will notify the other Party of its initial JDC members within thirty (30) days after the Effective Date. Each Party may change its JDC members at any time by written notice to the other Party, which may be delivered at a scheduled meeting of the JDC. Any member of the JDC may designate a substitute to attend

and perform the functions of that member at any meeting of the JDC. The JDC shall appoint one (1) of its members as chairman, whose role shall be to convene and preside at meetings of the JDC, but the chairman shall not be entitled to prevent items from being discussed. Each Party may, with the consent of the other Party, such consent not to be unreasonably withheld or delayed, invite non-member representatives of such Party to attend meetings of the JDC. Santen may dissolve the JDC with a written notice to Tracon any time upon the latest date of receipt by Santen or its Affiliate or Sublicensee of Regulatory Approval for the first Product among the U.S., Japan, and the first of United Kingdom, France or Germany.

(c) Responsibilities. The JDC shall, unless as otherwise agreed to by the Parties:

(i) periodically review the results of the Development Plan to ensure, to the extent reasonably practical, compliance with obligations under this Agreement;

(ii) review protocols for any clinical studies and regulatory filings for Compounds and Products in the Field in the Territory;

(iii) facilitate the exchange between the Parties of information regarding development and regulatory activities with respect to Products and Tracon Products;

(iv) review the publication strategy with respect to Products and Tracon Products in the Field in the Territory; and

(v) perform such other duties as are specifically assigned by the Parties to the JDC in this Agreement.

(d) Meetings. The JDC will hold a meeting every six (6) months or sooner, if needed, as reasonably agreed to by the Parties. Such meetings may be in person, via videoconference, or via teleconference. The location of in-person JDC meetings will be determined by the Parties. At least seven (7) Business Days prior to each JDC meeting, each Party shall provide written notice to the other Party of agenda items proposed by such Party for discussion at such meeting, together with appropriate information related thereto. Reasonably detailed written minutes will be kept of all JDC meetings. Meeting minutes will be prepared by the Party at whose office such meeting is held and sent to each member of the JDC for review and approval within ten (10) Business Days after the meeting. Minutes will be deemed approved unless a member of the JDC objects to the accuracy of such minutes within fifteen (15) Business Days of receipt.

(e) Decisions. The Parties agree that the JDC shall have no decision-making authority with respect to any matters related to this Agreement, the Development Plan or Santen's development and commercialization activities.

(f) Withdrawal. At any time during the Term and for any reasonable reason, Tracon shall have the right to withdraw from participation in the JDC upon written notice to Santen, which notice shall be effective immediately upon receipt ("***Withdrawal Notice***"). Following the issuance of a Withdrawal Notice and subject to this Section 3.3(f), Tracon's representatives to the JDC shall not participate in any meetings of the JDC. If, at any time,

following the issuance of a Withdrawal Notice, Tracon wishes to resume participation in the JDC, Tracon shall notify Santen in writing and, thereafter, Tracon's representatives to the JDC shall be entitled to attend any subsequent meeting of the JDC and to participate in the activities of, the Committees as provided in this Article 3 as if a Withdrawal Notice had not been issued by Tracon. Following Tracon's issuance of a Withdrawal Notice, unless and until Tracon resumes participation in the JDC in accordance with this Section 3.3(f): (i) all meetings of the JDC shall be held at Santen's facilities; and (ii) Tracon shall have the right to continue to receive the minutes of the JDC meetings, but shall not have the right to approve the minutes for any JDC meeting held after Tracon's issuance of a Withdrawal Notice. In any event, Tracon's withdrawal shall not impair Santen's rights to receive technology transfer under Section 2.6.

3.4 Manufacture and Supply. During the Term, Tracon shall, or shall cause […***…], to supply the Compound to Santen as ordered by Santen from time to time, subject to the terms of this Section 3.4. Santen agrees to purchase Compounds manufactured by […***…] for use in manufacturing Products for […***…], pursuant to a written supply agreement, which shall be separately discussed and agreed in good faith by the Parties (the "***Supply Agreement***"), and will include the terms set forth on ***Exhibit D***. Santen may purchase Compounds manufactured by […***…] for use in manufacturing Products for […***…], pursuant to a written supply agreement, which shall be separately discussed and agreed in good faith by Santen with Tracon or […***…].

3.5 Commercialization. Santen (itself and through its Affiliates and Sublicensees, as applicable) shall be solely responsible, at its own expense, for commercialization of Products in the Field in the Territory.

3.6 Compliance with Applicable Laws. Each Party shall conduct, and shall require its Affiliates and Sublicensees and other licensees, and if applicable Third Party contract manufacturers, including Lonza, to conduct, all development, regulatory, manufacturing and commercialization activities with respect to Compounds and Products or Tracon Products (as applicable) in the Territory in compliance with all Applicable Laws, including good scientific and clinical practices under the Applicable Laws of the country in which such activities are conducted.

3.7 Diligence.

(a) Development and Regulatory. Santen (itself and through its Affiliates and Sublicensees, as applicable) shall use Commercially Reasonable Efforts to develop a Product in the Field in the Territory, including conducting development activities in accordance with the Development Plan, and to obtain Regulatory Approvals of Products in the Field in the Territory. Without limiting the foregoing, Santen and Tracon will agree on a date by which Santen will file an IND for the Initial Product in the Field with the FDA (the "***IND Filing Date***"), based on an agreed upon set of activities to be undertaken collaboratively by the Parties following the Effective Date. In the event that Santen does not file such IND by the IND Filing Date, Santen can extend the date provided that Santen can show reasonable progress toward meeting the IND Filing Date.

***Confidential Treatment Requested

(b) Commercialization. Following receipt of Regulatory Approval for any Product in the Field in any country or other regulatory jurisdiction in the Territory, Santen (itself and through its Affiliates and Sublicensees, as applicable) shall use Commercially Reasonable Efforts to commercialize such Product in the Field and meet market demand for such Product in the Field in such country or other jurisdiction. Without limiting the foregoing, Santen (i) agrees to establish and maintain sufficient resources to be able to commercialize Products in the Field in the Territory, and (ii) with regards to commercialization of Products in the Field in the U.S., will put in place and maintain the personnel as described in **Exhibit C** (the "***U.S. Diligence Obligation***").

3.8 Tracon Co-Promotion Right. If Santen does not meet the U.S. Diligence Obligation, then Tracon shall […***…] have the right to co-promote Products in the Field in the U.S. with Santen (the "***Co-Promotion Right***"), as set forth in this Section 3.8. Tracon may exercise the Co-Promotion Right at any time during the period commencing […***…] months prior to the Estimated BLA Filing Date and ending […***…] months following the Actual BLA Filing Date, as such terms are defined in **Exhibit C**, by notifying Santen of such exercise in writing. Santen shall notify Tracon in writing of the Estimated BLA Filing Date at least […***…] months prior to the Estimated BLA Filing Date and of the Actual BLA Filing Date within […***…] days after the Actual BLA Filing Date. Santen shall provide Tracon written notice, as promptly as possible following the Estimated BLA Filing Date and in any event no later than the Actual BLA Filing Date, a reasonably detailed summary of the Phase III Clinical Trial development costs that enabled filing of a BLA in the U.S. (the "***Phase III Costs***"). In the event that Tracon does not exercise the Co-Promotion Right as provided in this Section 3.8, Tracon shall have no right to promote Product in the Field in the U.S. with Santen, and Santen shall have no further obligation with respect to the Co-Promotion Right. In the event that Tracon exercises the Co-Promotion Right as provided in this Section 3.8, within […***…] days following such exercise of the Co-Promotion Right, Tracon and Santen shall negotiate in good faith and enter into a co-promotion agreement incorporating the following terms and such other terms agreed to by the Parties (such negotiation period may be extended upon mutual written agreement):

(a) Tracon shall pay to Santen (or reimburse Santen for, if Phase III Clinical Trial development is complete) a specific percentage up to […***…] percent ([…***…]%) as specified in the written notice from Tracon exercising the Co-Promotion Right (the "***U.S. Percentage***") of Phase III Costs ; provided that […***…]. At the JDC meetings, Santen will keep Tracon informed on such planned and actual costs. In the event Santen conducts […***…], and Tracon elects to exercise its Co-Promotion Right, Tracon shall reimburse Santen the U.S. Percentage of Santen's costs of such trials according to a mutually agreed budget for such costs;

(b) Tracon shall have the right to co-promote Product in the Field in the U.S. by making the U.S. Percentage of total Primary Details annually with respect to Products in the Field in the U.S., as measured on a per physician call basis. A "***Primary Detail***" shall mean, with respect to a Product, a face-to-face one-on-one presentation regarding the features and benefits of such Product, its contraindications, approved uses and other pertinent information by

a sales representative to a vitreo-retinal specialist, during which a promotional message involving such Product is the most prominent item presented and comprises approximately […***…] of the time and cost of such presentation. For the avoidance of doubt, a Primary Detail shall not include (i) a reminder presentation or a sample drop or (ii) a presentation to groups, medical conventions or institutions;

(c) the Parties shall prepare a marketing plan regarding co-promotion of Products in the Field in the U.S. within a reasonable amount of time after Tracon's exercise of the Co-Promotion Right as provided in this Section 3.8;

(d) the Parties shall govern the co-promotion relationship through a joint commercialization committee to be established within a reasonable amount of time after Tracon's exercise of the Co-Promotion Right as provided in this Section 3.8, the details of such committee to be agreed upon by the Parties;

(e) upon the exercise of the Co-Promotion Right, […***…] shall bear […***…] in connection with the performance of its obligations under this Section 3.8 and the obligations set forth in the co-promotion agreement, and […***…] shall bear […***…] in connection with marketing and sales of Products in the Field in the U.S., including but not limited to, cost relating to post-Regulatory Approval clinical trials of a Product in the Field, whether or not required by the FDA, but subject to Section 3.8(a);

(f) Tracon shall receive the U.S. Percentage of profits from sales of Products in the Field in the U.S., but shall not also receive royalties on such sales;

(g) Tracon shall pay its share of Phase III Costs (as described in Section 3.8(a) above) with […***…] percent ([…***…]%) paid […***…], and the remainder […***…]; provided, however, that the entire amount of Tracon's share of Phase III Clinical Trial development costs must be paid to Santen within […***…] years of […***…]; and

(h) If Tracon fails to meet any of its obligations set forth in this Section 3.8 or any other obligations set forth in the co-promotion agreement (after notice and a reasonable cure period), Tracon shall have no right to co-promote Product in the Field in the U.S. with Santen, and Santen shall have no further obligation with respect to the Co-Promotion Right.

3.9 Disclosure of Santen Efforts. Until receipt by Santen or its Affiliate or Sublicensee of Regulatory Approval in the U.S., Japan, and the first of United Kingdom, France or Germany, Santen shall keep Tracon appropriately informed about Santen's research, development, clinical trial progress and commercialization efforts with respect to Products (including Compounds contained in such Products) in the Field in those countries. Without limiting the generality of the foregoing, Santen shall provide Tracon with prompt written notice of the following:

(a) Filing of an IND for any Product;

(b) initiation of a Phase II Clinical Trial or Phase III Clinical Trial of any Product;

(c) termination of development of any Product;

(d) filing of any BLA or MAA for any Product;

(e) receipt of approval of any BLA or MAA for any Product; and

(f) any other significant development or commercialization plans, activities or results with respect to Products in the Field.

4. PAYMENTS

4.1 Upfront Fee. Santen shall make a one-time, non-refundable, non-creditable payment to Tracon of U.S.$10,000,000 within five (5) Business Days after the Effective Date.

4.2 Milestone Payments.

(a) Initial Product. Within thirty (30) days following the first occurrence of each of the events set forth below for the first Initial Product (and, as applicable pursuant to Section 4.2(b) and (c), Alternate Product), Santen shall pay to Tracon each of the non-refundable, non-creditable milestone payments set forth below when such milestone is achieved by Santen or any of its Affiliates or Sublicensees:

Milestone Event	Milestone Payment
[…***…]	U.S.$[…***…]
[…***…]	U.S.$[…***…]
[…***…]	U.S.$[…***…]
[…***…]	U.S.$[…***…]
[…***…]	U.S.$[…***…]
[…***…]	U.S.$[…***…]
[…***…]	U.S.$[…***…]
[…***…]	U.S.$[…***…]
[…***…]	U.S.$[…***…]

***Confidential Treatment Requested

[…***…]	U.S.$[…***…]
[…***…]	U.S.$[…***…]
[…***…]	U.S.$[…***…]
[…***…]	U.S.$[…***…]
[…***…]	U.S.$[…***…]
Total Potential Milestone Payments	**U.S.$155,000,000**

* If Santen […***…], Santen will notify Tracon in writing no later than sixty (60) days after the date of the […***…] whether Santen (a) will […***…] or (b) will […***…]. If such notice indicates that Santen will […***…], then such notice shall be deemed as an achievement of milestone for […***…] for the purpose of this Section 4.2(a).

(b) Replacement of Initial Product with Alternate Product. If Santen or its Affiliate or Sublicensee terminates development of the Initial Product and commences development of an Alternate Product as a replacement for the Initial Product, then Santen shall pay to Tracon the milestone payments corresponding to the milestone events with respect to such replacement Alternate Product only for those milestone events that have not already been achieved with respect to the Initial Product.

(c) Milestone Payments for Alternate Products. If Santen or its Affiliate or Sublicensee develops an Alternate Product in addition to the Initial Product, then Santen shall pay to Tracon all applicable milestone payments as set forth in Section 4.2(a) for both the first Alternate Product and the first Initial Product.

4.3 Royalty Payments.

(a) Royalty Rate. Subject to the terms and conditions of this Agreement, Santen shall pay to Tracon royalties as set forth below on aggregate annual Net Sales in a Santen Fiscal Year (whether such aggregate annual Net Sales are achieved by Santen or any of its Affiliates or Sublicensees), provided however, for so long as Tracon receives the U.S. Percentage of profits from sales of Product in the U.S. under Section 3.8, Santen shall not pay to Tracon royalties on such sales and the Parties will discuss and agree in good faith to an appropriate adjustment to the tiers of aggregate annual Net Sales to take into account the fact that sales of Product in the U.S. are excluded:

***Confidential Treatment Requested

Aggregate Annual Net Sales	Royalty Rate
For that portion of aggregate annual Net Sales in a Santen Fiscal Year that is less than or equal to U.S.$[…***…]	[…***…]%
For that portion of aggregate annual Net Sales in a Santen Fiscal Year that is greater than U.S.$[…***…] and less than or equal to U.S.$[…***…]	[…***…]%
For that portion of aggregate annual Net Sales in a Santen Fiscal Year that is greater than U.S.$[…***…]	[…***…]%

(b) Adjustment for Competing Product.

(i) On a country-by-country basis and Product-by-Product basis, if:

(A) as of the anticipated date of Commercial Launch in a given country, there are or expected to be sales of any Competing Product(s) by anyone other than Santen or its Affiliates or Sublicensees, and

(B) Santen provides written documentation to Tracon demonstrating that (I) such Competing Product(s) is approved and marketed for use in the Field in such country or is being prescribed for use in the Field in such country, as measured by reputable published data for such country (e.g. by reference to prescription data collected by IMS) or as otherwise mutually agreed and that (II) […***…],

then the Royalty Rate with respect to such Product in such country shall be reduced by […***…] percent ([…***…]%) for purposes of calculating the royalty payment under Section 4.3(a); provided that any such reduction based on any sales of a Competing Product that contains a Compound by anyone other than Santen or its Affiliates or Sublicensees shall end at the time any of the Licensed Patents is enforced to stop sales of such Competing Product.

(ii) On a country-by-country basis and Product-by-Product basis, if:

(A) after the Commercial Launch in such country, sales of any Competing Product(s) by anyone other than Santen or its Affiliates or Sublicensees,

(B) Santen provides written documentation to Tracon demonstrating that such Competing Product(s) is approved and marketed for use in the Field in such country or is being prescribed for use in the Field in such country, as measured by reputable published data for such country (e.g. by reference to prescription data collected by IMS) or as otherwise mutually agreed, and

(C) such sales of all Competing Products result in a reduction by […***…] percent ([…***…]%) or more in gross sales of the applicable Product by Santen and

---

its Affiliates and Sublicensees compared to Base Sales in such country for […***…], as measured by reputable published marketing data for such country (e.g. by reference to sales data collected by IMS) or as otherwise mutually agreed,

then thereafter the Royalty Rate with respect to such Product in such country shall be reduced by […***…] percent ([…***…]%) for purposes of calculating the royalty payment under Section 4.3(a); provided that any such reduction based any sales of a Competing Product that contains a Compound by anyone other than Santen or its Affiliates or Sublicensees shall end at the time any of the Licensed Patents is enforced to stop sales of such Competing Product. The term "***Base Sales***" shall mean the average amount of total quarterly gross sales of such Product by Santen and its Affiliates and Sublicensees for the […***…] immediately preceding such given calendar quarters. In addition to the foregoing, in the event that […***…], as measured by reputable published data for such country (e.g. by reference to prescription data collected by IMS) or as otherwise mutually agreed, […***…].

(c) Existing Third Party Payment Obligations. In addition to the royalties payable by Santen pursuant to Section 4.3(a), Santen agrees to pay to Tracon all royalty payments due and payable by Tracon under the RPCI Agreement and under the Lonza Agreement with respect to the manufacture, use, marketing, distribution, import, export, offer for sale, promotion or sale of Products in the Field in the Territory by Santen and its Affiliates and Sublicensees in accordance with the terms of the RPCI Agreement and the Lonza Agreement, respectively. For the avoidance of doubt, Santen has no obligation to pay royalties due and payable by Tracon under (i) the RPCI Agreement if Santen does not use any RPCI Patents or any Licensed Patents described on ***Exhibit A-2*** and (ii) the Lonza Agreement if Santen does not use any Information or Patents licensed to Tracon under the Lonza Agreement. […***…], and if Tracon amends the RPCI Agreement or the Lonza Agreement to […***…], whether for inside or outside the Field, or both, […***…]. For the avoidance of doubt, royalty payments under the RPCI Agreement shall be payable until the expiration of the last-to-expire of the Patents on ***Exhibits A-1***, ***A-2*** and ***A-3*** that covers, in whole or in part, the developing, making, using, selling, offering to sell or importing any Product then being sold by Santen, its Affiliates or Sublicensees, or the Compound therein.

(d) Payments to Third Parties. Santen shall be responsible for all payments owed to any Third Party for any Patents, Information or other intellectual property rights licensed or acquired after the Effective Date (other than under the RPCI Agreement and the Lonza Agreement), which are necessary or useful to use, sell, offer for sale or import any Product in the Field in the Territory. If, during the Term, Santen determines that it is necessary to license or acquire from any Third Party any issued patent in order to practice the Licensed Patents for the development, manufacturing or commercialization of any Product in the Field in any country, an amount up to […***…] percent ([…***…]%) of any royalties paid to such Third Party in respect of a Product in such country shall be deducted from royalties otherwise due to Tracon with respect to such Product in such country under this Agreement; provided that in no event

shall the effect of such deduction and the adjustment in Section 4.3(b) reduce the royalties otherwise payable to Tracon in respect of such Product in such country (prior to giving effect to any such deduction and adjustment) by more than an amount equal to […***…] percent ([…***…]%) in any calendar quarter. Any amount of royalties paid to such Third Party which is entitled to be deducted under this Section 4.3(d) but is not deducted as a result of the foregoing limitation shall be carried over and applied against royalties payable to Tracon in respect of such Product in such country in subsequent calendar quarters until the full deduction is taken.

(e) Royalty Term. Royalty payments pursuant to this Section 4.3 shall be payable beginning upon Commercial Launch of the First Product (as defined below) in a given country and continuing on a country-by-country basis with respect to all the Products containing TRC105 (with respect to the First Product containing TRC105) or all the Products containing Alternate Compound (with respect to the First Product containing Alternate Compound), as applicable, sold by Santen or its Affiliates or Sublicensees until the later of (i) 12 years after the date of Commercial Launch of the applicable First Product in the applicable country or (ii) expiration of the last-to-expire Valid Claim within the Licensed Patents that covers Products or the Compound contained therein, or the use of such Product or Compound in the Field, in such country (the "***Royalty Term***"). For purposes of calculating Royalty Term under this Section 4.3(e), the "***First Product***" shall mean with respect to (i) all the Products containing TRC105 in a given country, the first Product containing TRC105 that is Commercially Launched in such country, and (ii) all the Products containing Alternate Compound in a given country, the first Product containing Alternate Compound that is Commercially Launched in such country.

(f) Adjustment for Joint Patents. On a country-by-country basis and Product-by-Product basis, if, after royalties have been paid with respect to a Product in a country for the full Royalty Term (excluding for this purpose only Valid Claims of any Joint Patents), and the only Patents that cover such Product or the Compound contained therein, or the use of such Product or Compound in the Field, in such country are Joint Patents, then the royalty rate payable with respect to such Product in such country for the remaining Royalty Term (i.e. until expiration of the last-to-expire Valid Claim within such Joint Patents) shall be reduced by […***…] percent ([…***…]%) for purposes of calculating the royalty payment under Section 4.3(a).

4.4 Sublicense Fees. Santen shall pay to Tracon […***…] percent ([…***…]%) of up-front payments […***…], and of payments for achievement of milestones […***…] other than […***…], received by Santen or its Affiliates from a Sublicensee for a sublicense granted under all or any portion of the License (***"Selected Sublicense Consideration"***). No payment shall be due from Santen to Tracon with respect to any other amounts received by Santen from a Sublicensee. Payments based on Selected Sublicense Consideration shall be made to Tracon within thirty (30) days following the receipt of such Selected Sublicense Consideration. If Santen receives from any Sublicensee any Selected Sublicense Consideration in a form other than cash payments, Santen shall pay Tracon the payment required by this Section 4.4 in cash based on the fair market value of such payment as of the date of receipt. In the event that Selected Sublicense Consideration is paid for the […***…]),

Santen shall pay Tracon the greater of (a) the payment due under this Section 4.4 with respect to such Selected Sublicense Consideration, or (b) the […***…], but not both.

5. PAYMENT; RECORDS; AUDITS

5.1 Payment; Reports. Royalties shall be calculated and reported for each calendar quarter. A report of Net Sales in sufficient detail to permit confirmation of the accuracy of the payment due, including, on a country-by-country basis, the number of Products sold, the gross sales and Net Sales of such Products, the royalties payable, the method used to calculate the royalties, the exchange rates used and any adjustments to royalties payable in accordance with Section 4.3 shall be due to Tracon within forty five (45) days of the end of each calendar quarter, and all payments due to Tracon under this Agreement shall be paid within thirty (30) days after the date of such report, unless otherwise specifically provided herein, including Section 4.3(c).

5.2 Exchange Rate; Manner and Place of Payment. All payments hereunder shall be payable in U.S. dollars. When conversion of payments from any foreign currency is required, such conversion shall be at an exchange rate equal to the average of the daily rates of exchange for the currency of the country from which the royalty payments are payable based on the TTM rate of Tokyo Mitsubishi UFJ bank, during the calendar quarter for which a payment is due. All payments owed under this Agreement shall be made by wire transfer in immediately available funds to a bank account designated in writing by Tracon, unless otherwise specified in writing by Tracon.

5.3 Income Tax Withholding. Tracon 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 Santen from any payment made to Tracon under this Agreement, Santen will (a) deduct such taxes from the payment made to Tracon, (b) timely pay the taxes to the proper taxing authority, and (c) send proof of payment to Tracon and certify its receipt by the taxing authority within thirty (30) days following such payment. For purposes of this Section 5.3, each Party agrees to provide the other with reasonably requested assistance to enable the due deduction by the paying Party and appropriate recovery by the other Party, which assistance includes, but is not limited to, provision of any tax forms and other

information that may be reasonably necessary in order for the paying Party not to withhold tax or to withhold tax at a reduced rate under an applicable bilateral income tax treaty.

5.4 Restrictions on Fund Transfers. In the event that, by reason of Applicable Law in any country, it becomes impossible or illegal, after reasonable efforts by Santen to do so, for Santen or its Affiliate to transfer, or have transferred on its behalf, payments owed Tracon hereunder, Santen will promptly notify Tracon of the conditions preventing such transfer and such payments will be deposited in local currency in the relevant country to the credit of Tracon in a recognized banking institution designated by Tracon.

5.5 Records; Audits. Santen shall keep, and require Sublicensees to keep, complete, fair and true books of accounts and records for the purpose of determining the amounts payable to Tracon pursuant to this Agreement. Such books and records shall be kept for such period of time required by law, but no less than four years following the end of the calendar quarter to

***Confidential Treatment Requested

which they pertain. Tracon shall have the right to cause an independent, certified public accountant reasonably acceptable to Santen to audit such records to confirm Net Sales, royalties and other payments for a period covering not more than four (4) years following the calendar quarter to which they pertain. Such audits may be exercised during normal business hours upon reasonable prior written notice to Santen. Prompt adjustments shall be made by the Parties to reflect the results of such audit. Tracon shall bear the full cost of such audit unless such audit discloses an underpayment by Santen of more than five percent (5%) of the amount of royalties or other payments due under this Agreement for any applicable calendar quarter, in which case, Santen shall bear the cost of such audit and shall promptly remit to Tracon the amount of any underpayment. Any overpayment by Santen revealed by an audit shall be fully-creditable against future payment owed by Santen to Tracon (and if no further payments are due, shall be refunded by Tracon at the request of Santen).

5.6 Late Payments. In the event that any payment due under this Agreement is not made when due, the payment shall accrue interest from the date due at the prime rate (as defined in the U.S. Federal Reserve Bulletin H.15 or any successor thereto) on the last business day of the applicable quarter prior to the date on which such payment is due, plus […***…] percent ([…***…]%) per annum; provided, however, that in no event shall such rate exceed the maximum legal annual interest rate. The payment of such interest shall not limit Tracon from exercising any other rights it may have as a consequence of the lateness of any payment.

6. CONFIDENTIALITY AND PUBLICATION

6.1 Confidential Information. Except to the extent expressly authorized by this Agreement or otherwise agreed in writing by the Parties, each Party (in such capacity, the "***Receiving Party***") agrees that, during the Term and for […***…] years thereafter, it shall keep confidential and shall not publish or otherwise disclose to any Third Party, and shall not use for any purpose, other than as expressly provided for in this Agreement or any other written agreement between the Parties, any Confidential Information furnished or made available to it by or on behalf of the other Party (in such capacity, the "***Disclosing Party***"). The Receiving Party shall use at least the same standard of care as it uses to protect proprietary or confidential information of its own (but in no event less than reasonable care) to ensure that its, and its Affiliates', employees, agents, consultants and other representatives do not disclose or make any unauthorized use of the Confidential Information. The Receiving Party shall promptly notify the Disclosing Party upon discovery of any unauthorized use or disclosure of the Disclosing Party's Confidential Information.

6.2 Exceptions. Confidential Information shall not include any information which the Receiving Party can prove by competent evidence: (a) is now, or hereafter becomes, through no act or failure to act on the part of the Receiving Party, generally known or available; (b) is known by the Receiving Party and/or any of its Affiliates at the time of receiving such information, as evidenced by its records; (c) is hereafter furnished to the Receiving Party and/or any of its Affiliates by a Third Party, as a matter of right and without restriction on disclosure; or (d) is independently discovered or developed by the Receiving Party and/or any of its Affiliates, without the use of Confidential Information of the Disclosing Party.

***Confidential Treatment Requested

6.3 Authorized Disclosure. Notwithstanding the provisions of Section 6.1, the Receiving Party may disclose Confidential Information of the Disclosing Party as expressly permitted by this Agreement, or if and to the extent such disclosure is reasonably necessary in the following instances:

(a) filing or prosecuting Patents as permitted by this Agreement;

(b) enforcing such Party's rights under this Agreement;

(c) prosecuting or defending litigation as permitted by this Agreement;

(d) complying with applicable court orders or governmental regulations;

(e) disclosure to Affiliates, actual and potential licensees and Sublicensees, employees, consultants, contractors or agents of the Receiving Party who have a need to know such information in order for the Receiving Party to exercise its rights or fulfill its obligations under this Agreement, provided, in each case, that any such Affiliate, actual or potential licensee or Sublicensee, employee, consultant or agent agrees to be bound by terms of confidentiality and non-use comparable in scope to those set forth in this Article 6;

(f) in the case of Tracon as the Receiving Party, disclosure to RPCI Licensor to the extent required to comply with the RPCI Agreement and to Lonza to the extent required to comply with the Lonza Agreement, provided such parties are bound by terms of confidentiality and non-use comparable in scope to those set forth in this Article 6 and Tracon shall be responsible for the acts and omissions of such parties with respect thereto; and

(g) disclosure to Third Parties in connection with due diligence or similar investigations by such Third Parties, and disclosure to potential Third Party investors in confidential financing documents, provided, in each case, that any such Third Party agrees to be bound by similar terms of confidentiality and non-use comparable in scope to those set forth in this Article 6.

Notwithstanding the foregoing, in the event a Party is required to make a disclosure of the other Party's Confidential Information pursuant to Section 6.3(c) or Section 6.3(d), it will, except where impracticable, give reasonable advance notice to the other Party of such disclosure and use efforts to secure confidential treatment of such information at least as diligent as such Party would use to protect its own confidential information, but in no event less than reasonable efforts. In any event, the Parties agree to take all reasonable action to avoid disclosure of Confidential Information hereunder.

6.4 Public Announcements.

(a) Press Releases. As soon as practicable following the date hereof, the Parties shall each issue a mutually agreed to press release announcing the existence of this Agreement. Except as required by Applicable Laws (including disclosure requirements of the U.S. Securities and Exchange Commission ("***SEC***") or any stock exchange on which securities issued by a Party or its Affiliates are traded), neither Party shall make any other public announcement concerning this Agreement or the subject matter hereof without the prior written

consent of the other, which shall not be unreasonably withheld or delayed; provided that each Party may make any public statement in response to questions by the press, analysts, investors or those attending industry conferences or financial analyst calls, or issue press releases, so long as any such public statement or press release is not inconsistent with prior public disclosures or public statements approved by the other Party pursuant to this Section 6.4 and which do not reveal non-public information about the other Party. In the event of a required public announcement, to the extent practicable under the circumstances, the Party making such announcement shall provide the other Party with a copy of the proposed text of such announcement sufficiently in advance of the scheduled release to afford such other Party a reasonable opportunity to review and comment upon the proposed text.

(b) Filing of this Agreement. The Parties will coordinate in advance with each other in connection with the filing of this Agreement (including redaction of certain provisions of this Agreement) with the SEC or any stock exchange or governmental agency on which securities issued by a Party or its Affiliate are traded, and each Party will use reasonable efforts to seek confidential treatment for the terms proposed to be redacted; provided that each Party will ultimately retain control over what information to disclose to the SEC or any stock exchange or other governmental agency, as the case may be, and provided further that the Parties will use their reasonable efforts to file redacted versions with any governing bodies which are consistent with redacted versions previously filed with any other governing bodies. Other than such obligation, neither Party (or its Affiliates) will be obligated to consult with or obtain approval from the other Party with respect to any filings to the SEC or any stock exchange or other governmental agency.

6.5 Publication. At least ten (10) Business Days prior to publishing, publicly presenting, and/or submitting for written or oral publication a manuscript, abstract or the like that includes Information relating to any Compound or Product that has not been previously published, each Party shall provide to the other Party a draft copy thereof for its clinical review (unless such Party is required by law to publish such Information sooner, in which case such Party shall provide such draft copy to the other Party as much in advance of such publication as possible). The publishing Party shall consider in good faith any comments provided by the other Party during such ten (10) Business Day period. In addition, the publishing Party shall, at the other Party's reasonable request, remove therefrom any Confidential Information of such other Party. The contribution of each Party shall be noted in all publications or presentations by acknowledgment or co-authorship, whichever is appropriate. Notwithstanding the foregoing, after the Commercial Launch, Santen may, without providing a draft copy to Tracon, publish any Information relating to the Product in the Field, which is not provided by Tracon hereunder.

6.6 Prior Non-Disclosure Agreement. As of the Effective Date, the terms of this Article 6 shall supersede any prior non-disclosure, secrecy or confidentiality agreement between the Parties (or their Affiliates) dealing with the subject of this Agreement, including the Nondisclosure Agreement. Any information disclosed pursuant to any such prior agreement shall be deemed Confidential Information for purposes of this Agreement.

6.7 Equitable Relief. Given the nature of the Confidential Information and the competitive damage that would result to a Party upon unauthorized disclosure, use or transfer of its Confidential Information to any Third Party, the Parties agree that monetary damages would

not be a sufficient remedy for any breach of this Article 6. In addition to all other remedies, a Party shall be entitled to seek specific performance and injunctive and other equitable relief as a remedy for any breach or threatened breach of this Article 6.

7. REPRESENTATIONS AND WARRANTIES; LIMITATION OF LIABILITY

7.1 Mutual Representations and Warranties. Each Party represents and warrants to the other that, as of the Effective Date:

(a) it is duly organized and validly existing under the laws of its jurisdiction of incorporation or formation, and has full corporate or other power and authority to enter into this Agreement and to carry out the provisions hereof;

(b) it is duly authorized to execute and deliver this Agreement and to perform its obligations hereunder, and the person or persons executing this Agreement on its behalf has been duly authorized to do so by all requisite corporate or partnership action; and

(c) this Agreement is legally binding upon it, enforceable in accordance with its terms, and does not conflict with any agreement, instrument or understanding, oral or written, to which it is a party or by which it may be bound, nor violate any material law or regulation of any court, governmental body or administrative or other agency having jurisdiction over it.

7.2 Additional Tracon Representations, Warranties and Covenants. Tracon represents, warrants and covenants to Santen, as of the Effective Date, as follows:

(a) Tracon has (i) sufficient legal or beneficial title, ownership or license rights in or to the Licensed Technology to grant the License to Santen as purported to be granted pursuant to this Agreement, including Santen's rights to sublicense as described in Section 2.2(a); and (ii) no Third Party (other than the RPCI Licensor) has taken any action before the United States Patent and Trademark Office, or any counterpart thereof outside the U.S., claiming legal or beneficial ownership of or license to any of the Licensed Patents; there is no Compound Manufacturing IP as of the Effective Date;

(b) Tracon has not as of the Effective Date, and will not during the Term, grant any right to any Third Party under the Licensed Technology in the Field or that would otherwise conflict with the rights granted to Santen hereunder;

(c) Tracon has not received any notice from a Third Party alleging that (i) the practice of the Licensed Technology infringes or may infringe such Third Party's intellectual property right, or (ii) any research, development or manufacture of the Products by Tracon prior to the Effective Date infringed or misappropriated the intellectual property rights of such Third Party;

(d) Tracon is not aware, as of the Effective Date, of any issued patent or published patent owned by a Third Party (other than RPCI and Lonza) that may be infringed by the development or manufacture of TRC105 or the […***…] version of TRC105 or by the development, manufacture and commercialization of any Product containing TRC105 or the

***Confidential Treatment Requested

[…***…] version of TRC105, provided however, that Tracon makes no representation with respect to the infringement of any Third Party use Patents in the Field;

(e) (i) the Licensed Patents that are issued as of the Effective Date are, to Tracon's knowledge, valid and in force, and (ii) no Third Party has asserted in writing that such issued Licensed Patents are invalid or unenforceable in the Territory;

(f) there are no pending actions, claims, investigations, suits or proceedings against Tracon or any of its Affiliates, at law or in equity, or before or by any Regulatory Authority, and Tracon has not received any written notice regarding any pending or threatened actions, claims, investigations, suits or proceedings against Tracon or any of its Affiliates, at law or in equity, or before or by any Regulatory Authority, in either case with respect to the Licensed Technology, and no Licensed Patent is the subject of any interference, opposition, cancellation or other protest proceeding;

(i) The Licensed Patents listed on ***Exhibits A-1*** and ***A-3*** are all Patents licensed from RPCI or Health Research, Inc. with respect to the Compounds, and there are no other agreements or understandings between RPCI or Health Research, Inc. and Tracon with respect to the Compound; and

(ii) Tracon has provided Santen a true and complete copy of the RPCI Agreement, and the RPCI Agreement is in full force and effect in accordance with its terms;

(iii) Tracon is in compliance in all material respects with its obligations under the RPCI Agreement and, to Tracon's knowledge, (A) RPCI has not breached the RPCI Agreement in any material respect, and (B) there is no basis for termination of the RPCI Agreement;

(iv) no Information licensed by RPCI to Tracon is necessary or useful for the exercise by Santen of its rights hereunder; and

(v) Tracon has the full rights to grant the sublicense under the RPCI Patents to Santen, including those Licensed Patents listed on ***Exhibit A-1*** as jointly owned by Tracon and Health Research, Inc., without consent of RPCI or Health Research, Inc.;

(vi) Tracon (i) has provided Santen a true and complete copy of the Lonza Agreement, and the Lonza Agreement is in full force and effect in accordance with its terms; and (ii) is in compliance in all material respects with its obligations under the Lonza Agreement; to Tracon's knowledge, (A) Lonza has not breached the Lonza Agreement in any material respect, and (B) there is no basis for termination of the Lonza Agreement; and there are no other agreements or understandings between Lonza and Tracon with respect to the Compound;

(g) No authorization, consent, approval of a Third Party, nor to Tracon's knowledge, any license, permit, exemption of or filing or registration with or notification to any court or Regulatory Authority is or will be necessary for the (i) valid execution and delivery of this Agreement by Tracon; or (ii) the consummation by Tracon of the transactions contemplated hereby as of the Effective Date (provided however that nothing in this Section 7.2(g) shall be

deemed to be a representation or warranty by Tracon that the exercise of its rights under this Agreement will not infringe the intellectual property rights of any Third Party);

(h) Tracon has complied with all Applicable Laws in connection with Tracon's prosecution of the Licensed Patents other than the RPCI Patents, including the duty of candor owed to any patent office pursuant to such laws;

(i) Neither Tracon nor any of its Affiliates has received any written notice of any unauthorized use, infringement, misappropriation, or dilution by any person, including any current or former employee or consultant of Tracon or its Affiliates, of the Licensed Technology, and to Tracon's knowledge, no Third Party is infringing or misappropriating or has infringed or misappropriated the Licensed Technology;

(j) The Licensed Technology includes all intellectual property rights Controlled by Tracon as of the Effective Date, which are reasonably necessary for the development and commercialization of the Products in the Field;

(k) The Patents listed on ***Exhibit A*** are the only Patents relating to the Compounds or Products, including the methods of use in the Field or manufacture of the Compounds or Products, which Tracon or a Tracon Affiliate has an ownership or license interest (other than any Patents […***…]), either alone or jointly with any Third Party, as of the Effective Date;

(l) The inventors named in the Licensed Patents (excluding the RPCI Patents) are all of the inventors of the inventions claimed in such Licensed Patents and each of such inventors has assigned, or is under a written obligation to assign, to Tracon or its Affiliates all of his or her right, title and interest to such Licensed Patents (excluding the RPCI Patents) and the inventions described therein;

(m) all of Tracon's and its Affiliates' employees or contractors acting on its behalf performing research, development, manufacturing, regulatory or commercialization activities with respect to TRC105 are and will be obligated under a binding written agreement to comply with obligations of confidentiality and non use no less restrictive than those set forth in Section 6;

(n) neither Tracon nor any of its Affiliates is debarred or disqualified under the United States Federal Food, Drug and Cosmetic Act or comparable Applicable Laws in the Territory and it does not, and will not during the Term, employ or use the services of any person who is debarred or disqualified, in connection with activities relating to TRC105 outside the Field; and in the event that Tracon becomes aware of the debarment or disqualification or threatened debarment or disqualification of any person providing services to Tracon, including any of Tracon and its Affiliates or Sublicensees, which directly or indirectly relate to TRC105 outside the Field, Tracon shall immediately notify Santen in writing and Tracon shall cease employing, contracting with, or retaining any such person to perform any services relating to TRC105 outside the Field;

(o) in the performance of its obligations under this Agreement, Tracon shall comply and shall cause its and its Affiliates' employees and contractors to comply with all Applicable Laws;

(p) Tracon and, to its knowledge, its and its Affiliates' employees and contractors have not and shall not, in connection with the performance of their respective obligations under this Agreement directly or indirectly through Third Parties, pay, promise or offer to pay, or authorize the payment of, any money or give any promise or offer to give, or authorize the giving of anything of value to a Public Official or Entity or other person for purpose of obtaining or retaining business for or with, or directing business to, any person, including Tracon (it being understood that, without any limitation to the foregoing, Tracon, and to its knowledge, its and its Affiliates' employees and contractors, has not directly or indirectly promised, offered or provided any corrupt payment, gratuity, emolument, bribe, kickback, illicit gift or hospitality or other illegal or unethical benefit to a Public Official or Entity or any other person in connection with the performance of Tracon's obligations under this Agreement, and shall not, directly or indirectly, engage in any of the foregoing);

(q) Tracon and its Affiliates, and their respective employees and contractors, in connection with the performance of their respective obligations under this Agreement, shall not cause Santen or its officers, directors, employees or agents to be in violation of the FCPA, Export Control Laws, or any other Applicable Laws or otherwise cause any reputational harm to the Santen or its officers, directors, employees or agents; and

(r) Tracon shall immediately notify the other Party if it has any information or suspicion that there may be a violation of the FCPA, Export Control Laws, or any other Applicable Laws in connection with the performance of its obligations under this Agreement or its other activities with TRC105.

7.3 Additional Santen Representations and Warranties. Santen represents and warrants to Tracon, as of the Effective Date:

(a) Santen (i) has the right to grant the license in Section 2.5 as of the Effective Date; and (ii) has not as of the Effective Date, and will not during the Term, grant any right to any Third Party that would conflict with the rights granted to Tracon hereunder;

(b) no authorization, consent, approval of a Third Party, nor to Santen's knowledge, any license, permit, exemption of or filing or registration with or notification to any court or Regulatory Authority is or will be necessary for the (i) valid execution and delivery of this Agreement by Santen; or (ii) the consummation by Santen of the transactions contemplated hereby as of the Effective Date (provided however that nothing in this Section 7.3(b) shall be deemed to be a representation or warranty by Santen that its exercise of its rights under this Agreement will not infringe the intellectual property rights of any Third Party);

(c) all of Santen's and its Affiliates' employees or contractors acting on its behalf performing research, development, manufacturing, regulatory or commercialization activities with respect to Compounds and Products in the Field in the Territory as contemplated

by this Agreement are and will be obligated under a binding written agreement to comply with obligations of confidentiality and non-use no less restrictive than those set forth in Section 6;

(d) neither Santen nor any of its Affiliates is debarred or disqualified under the United States Federal Food, Drug and Cosmetic Act or comparable Applicable Laws in the Territory and it does not, and will not during the Term, employ or use the services of any person who is debarred or disqualified, in connection with activities relating to Compounds or Products in the Field in the Territory; and in the event that Santen becomes aware of the debarment or disqualification or threatened debarment or disqualification of any person providing services to Santen, including any of Santen and its Affiliates or Sublicensees, which directly or indirectly relate to Compounds or Products in the Field in the Territory, Santen shall immediately notify Tracon in writing and Santen shall cease employing, contracting with, or retaining any such person to perform any services relating to Compounds or Products in the Field in the Territory;

(e) in the performance of its obligations under this Agreement, Santen shall comply and shall cause its and its Affiliates' employees and contractors to comply with all Applicable Laws;

(f) Santen and, to its knowledge, its and its Affiliates' employees and contractors have not and shall not, in connection with the performance of their respective obligations under this Agreement directly or indirectly through Third Parties, pay, promise or offer to pay, or authorize the payment of, any money or give any promise or offer to give, or authorize the giving of anything of value to a Public Official or Entity or other person for purpose of obtaining or retaining business for or with, or directing business to, any person, including Santen (it being understood that, without any limitation to the foregoing, Santen, and to its knowledge, its and its Affiliates' employees and contractors, has not directly or indirectly promised, offered or provided any corrupt payment, gratuity, emolument, bribe, kickback, illicit gift or hospitality or other illegal or unethical benefit to a Public Official or Entity or any other person in connection with the performance of Santen's obligations under this Agreement, and shall not, directly or indirectly, engage in any of the foregoing);

(g) Santen and its Affiliates, and their respective employees and contractors, in connection with the performance of their respective obligations under this Agreement, shall not cause Tracon or its officers, directors, employees or agents to be in violation of the FCPA, Export Control Laws, or any other Applicable Laws or otherwise cause any reputational harm to Tracon or its officers, directors, employees or agents;

(h) Santen shall immediately notify Tracon if Santen has any information or suspicion that there may be a violation of the FCPA, Export Control Laws, or any other Applicable Laws in connection with the performance of its obligations under this Agreement or the performance of research, development, manufacturing, regulatory or commercialization activities with respect to Compounds and Products in the Field in the Territory; and

(i) Santen has in place an anti-corruption and anti-bribery policy and in connection with the performance of its obligations under this Agreement, Santen shall comply and shall cause its and its Affiliates' employees to comply with Santen's policy.

7.4 Performance by Affiliates, Sublicensees and Subcontractors. The Parties recognize that each may perform some or all of its obligations or exercise some or all of its rights under this Agreement through one or more Affiliates or subcontractors or, in the case of Santen, Sublicensees; provided, however, that each Party shall remain responsible for the performance by its Affiliates, subcontractors and Sublicensees and shall cause its Affiliates, subcontractors and Sublicensees to comply with the provisions of this Agreement in connection with such performance. In particular, if any Affiliate, subcontractor or Sublicensee participates in research, development, manufacturing or commercialization activities under this Agreement or with respect to Products, the restrictions of this Agreement which apply to the activities of such Party with respect to Products shall apply equally to the activities of such Affiliate, subcontractor or Sublicensee.

7.5 Disclaimer. Except as expressly set forth in this Agreement, THE TECHNOLOGY AND INTELLECTUAL PROPERTY RIGHTS PROVIDED BY EACH PARTY HEREUNDER AND THE ASSISTANCE TO BE PROVIDED BY ANY OF THE PARTIES TO THE OTHER HEREUNDER ARE PROVIDED "AS IS," AND EACH PARTY EXPRESSLY DISCLAIMS ANY AND ALL WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF DESIGN, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OBTAINING SUCCESSFUL RESULTS, OR NON-INFRINGEMENT OF THE INTELLECTUAL PROPERTY RIGHTS OF THIRD PARTIES, EXCEPT AS REPRESENTED ABOVE IN THIS ARTICLE 7, OR ARISING FROM A COURSE OF DEALING, USAGE OR TRADE PRACTICES.

7.6 Limitation of Liability. EXCEPT FOR PAYMENTS UNDER ARTICLE 4 OR LIABILITY FOR BREACH OF ARTICLE 6, NEITHER PARTY SHALL BE ENTITLED TO RECOVER FROM THE OTHER PARTY ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES IN CONNECTION WITH THIS AGREEMENT OR ANY LICENSE GRANTED HEREUNDER; *provided, however,* that this Section 7.6 shall not be construed to limit either Party's indemnification obligations under Article 10.

8. INTELLECTUAL PROPERTY

8.1 Ownership. As between the Parties, Tracon is the owner or, in the case of RPCI Patents, exclusive licensee, of all right, title and interest in and to the Licensed Technology, and Santen is the owner of all right, title and interest in and to the Santen Technology. A Party shall have and retain all right, title and interest in any discovery or invention, whether or not patentable, relating to any Compound or any Product or its manufacture or use made in the course of research, development, manufacturing, regulatory or commercialization activities as contemplated by this Agreement solely by one or more employees or agents of such Party and/or its Affiliates or other persons acting under their authorities. The Parties shall jointly own rights in any discovery or invention, whether or not patentable, relating to any Compound or any Product or its manufacture or use made in the course of research, development, manufacturing, regulatory or commercialization activities as contemplated by this Agreement jointly by one or more employees or agents of each Party and/or its Affiliates or other persons acting under their authorities ("***Joint Inventions***") and Patent rights therein ("***Joint Patents***"). As joint owners, each Party shall be entitled to use, and grant licenses to use, Joint Inventions and Joint Patents

without the consent of or any duty of accounting to the other Party, and Tracon's interest in such Joint Inventions and Joint Patents shall be part of the Licensed Technology and shall be subject to the License granted to Santen. Inventorship shall be determined in accordance with U.S. patent law.

8.2 Patent Prosecution and Maintenance.

(a) Licensed Patents. Tracon shall have the sole (subject to Section 8.2(a)(ii)) right, but not the obligation, at its own expense, to control the preparation, filing, prosecution (including any interferences, reissue proceedings and reexaminations) and maintenance of the Licensed Patents. Tracon shall keep Santen reasonably informed of progress with regard to the preparation, filing, prosecution and maintenance of Licensed Patents including the countries in the Territory in which it intends to file, maintain or abandon a given Licensed Patent. Tracon will notify Santen of all warning letters, conflict proceedings, reexaminations, reissuance, oppositions, revocation proceedings or any other material challenge relating to a given Licensed Patent. Tracon will consult with, and consider in good faith the requests and suggestions of, Santen with respect to strategies for filing and prosecuting Licensed Patents. In the event that Tracon desires to abandon or cease prosecution or maintenance of any Licensed Patent, Tracon shall provide reasonable prior written notice to Santen of such intention (which notice shall, in any event, be given no later than sixty (60) days prior to the next deadline for any action that may be taken with respect to such Patent with the applicable patent office), and upon Santen's written election provided no later than thirty (30) days after such notice from Tracon, Tracon shall continue prosecution and/or maintenance of

such Patent at Santen's direction and expense; provided, that Santen shall be allowed to offset its out-of-pocket costs for prosecuting and maintaining such Patents from the royalty and other payments due to Tracon under this Agreement. If Santen does not provide such election within thirty (30) days after such notice from Tracon or fails to pay for prosecution or maintenance of any Licensed Patent, if any, with respect to which it has previously made such election, Tracon may, in its sole discretion, continue prosecution and maintenance of such Patent or discontinue prosecution and maintenance of such Patent. The provisions of this Section 8.2(a) are subject to the rights of RPCI Licensor under the RPCI Agreement with respect to the RPCI Patents. With respect to Licensed Patents that have issued or may issue, a statement referencing the exclusive license granted to Santen pursuant to Section 2.1 shall be registered with the patent office in the countries designated by Santen, at Santen's cost, as soon as is practically possible after the issuance of the respective Licensed Patents. Tracon shall execute, and shall use Commercially Reasonable Efforts to cause RPCI Licensor to execute, such documents and instruments as may be required to effect the registration of such statement or otherwise cooperate with Santen in connection with the registration of such statement with the respective patent offices where required or permitted by Applicable Laws.

(b) Santen Patents.

(i) Santen shall have the sole (subject to Section 8.2(b)(ii)) right, but not the obligation, at its own expense, to control the preparation, filing, prosecution (including any interferences, reissue proceedings and reexaminations) and maintenance of the Santen Patents. Santen shall keep Tracon reasonably informed of progress with regard to the preparation, filing, prosecution and maintenance of Santen Patents, including the countries in the

Territory in which it intends to file, maintain or abandon a Santen Patent. Santen will notify Tracon of all warning letters, conflict proceedings, reexaminations, reissuance, oppositions, revocation proceedings or any other material challenge relating to a Santen Patent. Santen will consult with, and consider in good faith the requests and suggestions of, Tracon with respect to strategies for filing and prosecuting such Santen Patents.

(ii) In the event that Santen desires to abandon or cease prosecution or maintenance of any Santen Patent, Santen shall provide reasonable prior written notice to Tracon of such intention (which notice shall, in any event, be given no later than sixty (60) days prior to the next deadline for any action that may be taken with respect to such Santen Patent or Joint Patent with the applicable patent office), and upon Tracon's written election provided no later than thirty (30) days after such notice from Santen, Santen shall continue prosecution and/or maintenance of such Santen Patent at Tracon's direction and expense. If Tracon does not provide such election within thirty (30) days after such notice from Santen or fails to pay for prosecution or maintenance of any Santen Patent with respect to which it has previously made such election, Santen may, in its sole discretion, continue prosecution and maintenance of such Santen Patent or discontinue prosecution and maintenance of such Santen Patent.

(c) Joint Patents.

(i) Santen shall have the first right, but not the obligation, to control the preparation, filing, prosecution (including any interferences, reissue proceedings and reexaminations) and maintenance of the Joint Patents, using a patent counsel selected jointly by the Parties. Santen shall keep Tracon reasonably informed of progress with regard to the preparation, filing, prosecution and maintenance of Joint Patents and shall consult with Tracon regarding the countries in the Territory in which to file, maintain or abandon a Joint Patent. Santen will provide Tracon with (A) a copy of the final draft of any proposed application for a Joint Patent at least thirty (30) days prior to filing the same in any patent office worldwide, (B) a copy of each patent application for a Joint Patent as filed, together with a notice of its filing date and serial number, (C) a copy of any action, communication, letter, or other correspondence issued by the relevant patent office within ten (10) days of receipt thereof, (D) a copy of any response, amendment, paper, or other correspondence filed with the relevant patent office within ten (10) days of receipt of the as-filed document, and (E) prompt notice of the allowance, grant, or issuance of any Joint Patents. Santen will also notify Tracon of all warning letters, conflict proceedings, reexaminations, reissuance, oppositions, revocation proceedings or any other material challenge relating to a Joint Patent. Santen will consult with, and consider in good faith the requests and suggestions of, Tracon with respect to strategies for filing and prosecuting Joint Patents. The Parties shall share equally the expenses of the foregoing for Joint Patents. Santen shall invoice Tracon periodically, but not more often than monthly, for such expenses with respect to Joint Patents, and payment shall be due thereon within thirty (30) days. If Tracon declines or fails to pay for its share of expenses for any Joint Patent, then such patent shall be automatically assigned to Santen without any charge and it shall be owned by Santen but shall neither be considered a Licensed Patent nor a Santen Patent hereunder.

(ii) In the event that Santen desires to abandon or cease prosecution or maintenance of any Joint Patent, Santen shall provide reasonable prior written notice to Tracon of such intention (which notice shall, in any event, be given no later than sixty (60) days prior to

the next deadline for any action that may be taken with respect to such Joint Patent with the applicable patent office), and upon Tracon's written election provided no later than thirty (30) days after such notice from Santen, Santen shall assign such Joint Patent to Tracon. If Tracon does not provide such election within thirty (30) days after such notice from Santen, Santen may, in its sole discretion, continue prosecution and maintenance of such Joint Patent or discontinue prosecution and maintenance of such Joint Patent.

If Santen fails to pay for its share of expenses for any Joint Patent, then such patent shall be automatically assigned to Tracon without any charge and it shall be owned by Tracon but shall not be considered a Licensed Patent hereunder.

(d) Cooperation of the Parties. Each Party agrees to cooperate fully in the preparation, filing, prosecution and maintenance of Licensed Patents, Santen Patents and Joint Patents under this Section 8.2 and in the obtaining and maintenance of any patent extensions, supplementary protection certificates and the like with respect thereto respectively at its own costs. Such cooperation includes, but is not limited to: (a) executing all papers and instruments, or requiring its employees or contractors, to execute such papers and instruments, so as to enable the other Party to apply for and to prosecute patent applications in any country as permitted by this Section 8.2; and (b) promptly informing the other Party of any matters coming to such Party's attention that may affect the preparation, filing, prosecution or maintenance of any such patent applications.

8.3 Infringement by Third Parties.

(a) Notice. In the event that either Tracon or Santen becomes aware of any infringement or threatened infringement by a Third Party of any Licensed Patent, Santen Patent or Joint Patent, it shall notify the other Party in writing to that effect.

(b) Licensed Patents. Tracon shall have the first right, but not the obligation, to bring and control any action or proceeding with respect to infringement of any Licensed Patent at its own expense and by counsel of its own choice, and, to the extent any such infringement is in the Field, Santen shall have the right, at its own expense, to be represented in any such action by counsel of its own choice. If Tracon fails to bring any such action or proceeding with respect to infringement of any Licensed Patent within ninety (90) days following the notice of alleged infringement (or sooner, if failure to take such action would adversely affect Santen's ability to exercise its right under this Section 8.3(b) and provided that Santen gives Tracon at least three (3) Business Days' notice of such fact), Santen shall have the right to bring and control any such action at its own expense and by counsel of its own choice but only to the extent such infringement is in the Field, and Tracon shall have the right, at its own expense, to be represented in any such action by counsel of its own choice. The provisions of this Section 8.3(b) are subject to the rights and obligations of RPCI Licensor under the RPCI Agreement with respect to patent infringement actions and proceedings regarding the RPCI Patents.

(c) Santen Patents. Santen shall have the first right, but not the obligation, to bring and control any action or proceeding with respect to infringement of any Santen Patent at its own expense and by counsel of its own choice, and, to the extent any such infringement is outside the Field, Tracon shall have the right, at its own expense, to be represented in any such action by counsel of its own choice. If Santen fails to bring any such action or proceeding with

respect to infringement of any Santen Patent within ninety (90) days following the notice of alleged infringement (or sooner, if failure to take such action would adversely affect Tracon's ability to exercise its right under this Section 8.3(c) and provided that Tracon gives Santen at least three (3) Business Days' notice of such fact), Tracon shall have the right to bring and control any such action at its own expense and by counsel of its own choice but only to the extent such infringement is outside the Field, and Santen shall have the right, at its own expense, to be represented in any such action by counsel of its own choice.

(d) Joint Patents. Santen shall have the first right, but not the obligation, to bring and control any action or proceeding with respect to infringement of any Joint Patent at its own expense and by counsel of its own choice, and Tracon shall have the right, at its own expense, to be represented in any such action by counsel of its own choice. If Santen fails to bring any such action or proceeding with respect to infringement of any Joint Patent within ninety (90) days following the notice of alleged infringement (or sooner, if failure to take such action would adversely affect Tracon's ability to exercise its right under this Section 8.3(d) and provided that Tracon gives Santen at least three (3) Business Days' notice of such fact), Tracon shall have the right to bring and control any such action at its own expense and by counsel of its own choice, and Santen shall have the right, at its own expense, to be represented in any such action by counsel of its own choice.

(e) Cooperation; Award. In the event a Party brings an infringement action in accordance with this Section 8.3, the other Party shall cooperate fully, including, if required to bring such action, the furnishing of a power of attorney or being named as a party. Neither Party shall enter into any settlement or compromise of any action under this Section 8.3 which would in any manner alter, diminish, or be in derogation of the other Party's rights under this Agreement without the prior written consent of such other Party, which shall not be unreasonably withheld. Except as otherwise agreed by the Parties in connection with a cost-sharing arrangement, any recovery realized by a Party as a result of any action or proceeding pursuant to this Section 8.3, whether by way of settlement or otherwise, shall be applied first to reimburse the Parties' documented out-of-pocket legal expenses relating to the action or proceeding in proportion to their expenses, and any remaining amounts shall be […***…] and, in the case Santen brought and controlled such action or proceeding, such remaining amounts that […***…].

8.4 Infringement of Third Party Rights. Each Party shall promptly notify the other Party in writing of any allegation by a Third Party that the activity of either Party pursuant to this Agreement infringes or may infringe the intellectual property rights of such Third Party. In such event, the provision of Section 10.2 and 10.3 shall govern the rights of the Parties, as applicable.

8.5 Marking. To the extent required by law, Santen shall, and shall cause its Affiliates and/or Sublicensees to, mark all Products sold under this Agreement with the number of each issued Licensed Patent that applies to such Product.

8.6 Trademarks. Santen shall own and be responsible for all trademarks, trade names, branding, or logos related to Products in the Field in the Territory, and will be

responsible for selecting, registering, defending, and maintaining the same at Santen's sole cost and expense.

9. TERM; TERMINATION

9.1 Term. This Agreement shall commence on the Effective Date, and unless terminated earlier as provided in this Article 9 or by written agreement of the Parties, shall expire upon the expiration of all payment obligations of Santen under Article 4 of this Agreement (the "***Term***").

9.2 Termination.

(a) Material Breach. A Party shall have the right to terminate this Agreement upon written notice to the other Party if such other Party is in material breach of this Agreement and has not cured such breach within ninety (90) days (or thirty (30) days with respect to any payment breach) after notice from the terminating Party requesting cure of the breach. Any such termination shall become effective at the end of such ninety (90) day (or thirty (30) day with respect to any payment breach) period unless the breaching Party has cured such breach prior to the end of such period or if not curable within such ninety (90) day period, has taken and continues to take good faith steps to commence the cure and has cured such breach within one hundred eighty (180) days after notice from the terminating Party requesting cure of the breach (or such later date as agreed in writing by the Parties).

(b) Bankruptcy. A Party shall have the right to terminate this Agreement upon written notice to the other Party upon the bankruptcy, dissolution or winding up of such other Party, or the making or seeking to make or arrange an assignment for the benefit of creditors of such other Party, or the initiation of proceedings in voluntary or involuntary bankruptcy against such other Party, or the appointment of a receiver or trustee of such other Party's property that is not discharged within thirty (30) days.

(c) Patent Challenge. Tracon shall have the right to terminate this Agreement immediately upon written notice to Santen if Santen or any of its Affiliates or Sublicensees, directly or indirectly through any Third Party, commences any interference or opposition proceeding with respect to, challenges the validity or enforceability of, or opposes any extension of, or the grant of a supplementary protection certificate with respect to, any Licensed Patent. Santen shall have the right to terminate this Agreement, or only the licenses granted under Section 2.5 of this Agreement, immediately upon written notice to Tracon if Tracon or any of its Affiliates or sublicensees, directly or indirectly through any Third Party, commences any interference or opposition proceeding with respect to, challenges the validity or enforceability of, or opposes any extension of, or the grant of a supplementary protection certificate with respect to, any Santen Patent.

(d) Santen Termination At Will. Santen shall have the right to terminate this Agreement in its entirety or on a country-by-country basis, for any reason or for no reason, upon at least ninety (90) days' (or thirty (30) days' notice if subsequent to a Change of Control) prior written notice to Tracon, specifying the countries with respect to which this Agreement is

terminated (the "***Terminated Countries***"). In such event, absent a breach by Santen, no compensation or damages shall be due to Tracon solely due to the termination of this Agreement.

(e) Termination with Respect to RPCI Patents. Upon early termination of the RPCI Agreement, all rights under the License with respect to RPCI Patents shall automatically terminate, and if Santen is in compliance with this Agreement as of the date of such termination and termination of the RPCI Agreement was not caused by any act or omission on the part of Santen or any of its Affiliates or Sublicensees, the sublicense under RPCI Patents granted by Tracon to Santen pursuant to this Agreement may, at Santen's option, remain in effect between Santen and RPCI Licensor in accordance with the provisions of the RPCI Agreement, except that RPCI shall not be obligated to incur any obligation to Santen not already incurred to Tracon by RPCI Licensor in the RPCI Agreement, and further Santen shall not be obligated to incur any obligation to RPCI Licensor already incurred to Tracon hereunder. Upon expiration of the RPCI Agreement, the License with respect to RPCI Patents shall survive on a fully-paid, royalty-free, non-exclusive, irrevocable and perpetual basis.

9.3 Effect of Expiration or Termination.

(a) Effect of Expiration. Upon expiration (but not earlier termination) of this Agreement and provided that Santen has paid all undisputed payments payable under this Agreement, the License shall survive on a fully-paid, royalty-free, irrevocable, perpetual basis, and all other rights and obligations of the Parties under this Agreement shall terminate, except as provided elsewhere in this Section 9.3 or in Section 9.4.

(b) Effect of Termination. Upon any termination of this Agreement (but not expiration under Section 9.1), the License shall automatically terminate and revert to Tracon, and all other rights and obligations of the Parties under this Agreement shall terminate, except as provided elsewhere in this Section 9.3 or in Section 9.4. If Santen terminates this Agreement pursuant to

Section 9.2(d) with respect to specific Terminated Countries, then (i) this Agreement shall remain in full force and effect in all countries other than the Terminated Countries, (ii) all of the consequences set forth in this Section 9.3 and Section 9.4, including references to Territory (but not to remaining Territory), shall apply solely with respect to the Terminated Countries, (iii) Santen's rights under Section 2.1 to develop, manufacture and have manufactured Products in the Terminated Countries shall continue on a non-exclusive basis solely for development or commercialization of such Product in the Field in the remaining Territory and references to the Territory in this Agreement shall thereafter exclude the Terminated Countries, and (iv) Tracon shall have the right, itself and with its Affiliates and licensees, to develop, manufacture and have manufactured Products in the Territory outside the Terminated Countries on a non-exclusive basis solely for development and commercialization of such Products in the Field in the Terminated Countries.

(c) Additional Effects of Termination. Upon any termination of this Agreement (but not expiration under Section 9.1), except termination of this Agreement by Santen under Section 9.2(a), Section 9.2(b) or Section 9.2(c), the following provisions shall apply:

(i) Effective as of such termination, Santen shall, and it hereby does, effective as of such termination, grant to Tracon an exclusive (except for Santen and its Affiliates), royalty-free, fully-paid, irrevocable and perpetual license, with the right to sublicense through multiple tiers of sublicense, under the Santen Technology, solely to develop, manufacture, have manufactured, use, promote, sell, offer to sell, import and export Compounds and Products in the Field in the Territory, or in the case of a partial termination under Section 9.2(d) only for the Terminated Countries, and the license granted under Section 2.5 outside the Field shall become exclusive (except for Santen and its Affiliates).

(ii) Santen shall, and it hereby does, effective as of such termination, assign to Tracon all of Santen's right, title and interest in and to any and all Product-specific trademarks used by Santen and its Affiliates in the Territory, or the Terminated Countries in the case of a partial termination under Section 9.2(d), including all goodwill therein, and Santen shall promptly take such actions and execute such instruments, assignments and documents as may be necessary to effect, evidence, register and record such assignment, at Tracon's cost.

(iii) As promptly as practicable (and in any event within 90 days) after such termination, Santen shall: (A) to the extent not previously provided to Tracon, deliver to Tracon true, correct and complete copies of all regulatory filings and registrations (including Regulatory Approvals) for Products in the Field in the Territory, or the Terminated Countries in the case of a partial termination under Section 9.2(d), and disclose to Tracon all Santen Know-How not previously disclosed to Tracon; (B) transfer or assign, or cause to be transferred or assigned, to Tracon or its designee (or to the extent not so assignable, take all reasonable actions to make available to Tracon or its designee the benefits of) all regulatory filings and registrations (including Regulatory Approvals) for Products in the Field in the Territory, or the Terminated Countries in the case of a partial termination under Section 9.2(d), whether held in the name of Santen or its Affiliate; and (C) take such other actions and execute such other instruments, assignments and documents as may be necessary to effect, evidence, register and record the transfer, assignment or other conveyance of rights under this Section 9.3(c)(iii) to Tracon. Notwithstanding the foregoing, in case of partial termination hereof by Santen in Terminated Countries, pursuant to Section 9.2(d), Santen may refer to or use such regulatory filings and registrations for the development, manufacture or commercialization of the Products in the remaining Territory, and Tracon or its Affiliates or licensees may refer to or use such regulatory filings and registrations in the Territory other than the Terminated Countries for the development, manufacture or commercialization of the Compound and/or the Products in the Terminated Countries.

(iv) Santen shall, as directed by Tracon, either wind-down any ongoing development activities of Santen and its Affiliates and Sublicensees with respect to any Products in the Field in the Territory, or the Terminated Countries in the case of a partial termination under Section 9.2(d), in an orderly fashion or promptly transfer such development activities to Tracon or its designee, in compliance with all Applicable Laws.

(d) Confidential Information. Upon expiration or termination of this Agreement in its entirety, except to the extent that a Party retains a license from the other Party as provided in this Article 9, each Party shall promptly return to the other Party, or delete or destroy, all relevant records and materials in such Party's possession or control containing

Confidential Information of the other Party; provided that such Party may keep one copy of such materials for archival purposes only subject to a continuing confidentiality obligations.

9.4 Accrued Obligations; Survival. Neither expiration nor any termination of this Agreement shall relieve either Party of any obligation or liability accruing prior to such expiration or termination, nor shall expiration or any termination of this Agreement preclude either Party from pursuing all rights and remedies it may have under this Agreement, at law or in equity, with respect to breach of this Agreement. In addition, the Parties' rights and obligations under Sections 2.5 (except in the case of termination by Santen pursuant to Section 9.2(a), 9.2(b) or 9.2(c)), 5.4, 5.5, 7.5, 7.6, 8.1, 9.3 and 9.4 and Articles 1, 6, 10, 11 and 12 of this Agreement shall survive expiration or any termination of this Agreement.

9.5 Rights Upon Bankruptcy. All rights and licenses granted under or pursuant to this Agreement are, and shall otherwise be deemed to be, for purposes of Section 365(n) of Title 11 of the United States Code ("***Section 365(n)***") and other similar laws in any

jurisdiction outside the U.S. (collectively, the "***Bankruptcy Laws***"), licenses of rights to be "intellectual property" as defined under the Bankruptcy Laws. If a case is commenced during the Term by or against a Party under the Bankruptcy Laws then, unless and until this Agreement is rejected as provided in such Bankruptcy Laws, such Party (in any capacity, including debtor-in-possession) and its successors and assigns (including a trustee) shall perform all of the obligations provided in this Agreement to be performed by such Party, including with respect to the RPCI Patents. If a case is commenced during the Term by or against a Party under the Bankruptcy Laws, this Agreement is rejected or not assumed as provided in the Bankruptcy Laws and the other Party elects to retain its rights hereunder as provided in the Bankruptcy Laws, then the Party subject to such case under the Bankruptcy Laws (in any capacity, including debtor-in-possession) and its successors and assigns (including a Title 11 trustee), shall provide to the other Party copies of all Information necessary for such other Party to prosecute, maintain and enjoy its rights under the terms of this Agreement promptly upon such other Party's written request therefor, including, without limitation, with respect to the RPCI Patents. In a bankruptcy of RPCI Licensor, Tracon shall use commercially reasonable efforts to exercise all rights under Section 365(n) to the extent required to continue to sublicense the RPCI Patents to Santen in accordance with this Agreement. In a bankruptcy of Tracon, Tracon shall assume the RPCI Agreement and shall use commercially reasonable efforts to obtain any consent from the RPCI Licensor to such assumption if consent is required. All rights, powers and remedies of the non-bankrupt Party as provided herein 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, without limitation, the Bankruptcy Laws) in the event of the commencement of a case by or against a Party under the Bankruptcy Laws. Section 365(n) and the terms of this Section 9.5 shall apply and shall be enforced in and by every court, tribunal, arbitrator, regulatory body or official resolving disputes between the Parties with respect to rights in intellectual property, whether such court, tribunal, arbitrator, regulatory body or official is located in the U.S. or in any other nation or jurisdiction.

10. INDEMNIFICATION

10.1 Indemnification of Tracon. Santen shall indemnify and hold harmless each of Tracon and its Affiliates and their respective directors, officers, employees, consultants, agents and successors and assigns of any of the foregoing (the "***Tracon Indemnitees***") from and against

any and all losses, damages, liabilities, expenses and costs, including reasonable legal expense and attorneys' fees ("***Losses***"), incurred by any Tracon Indemnitee as a result of any claims, demands, actions, suits or proceedings brought by a Third Party ("***Third Party Claims***") arising directly or indirectly out of: (a) the practice by Santen of the Licensed Technology or the practice of any sublicense granted by Santen under the Licensed Technology; (b) the research, development, manufacture, use, handling, storage, sale or other disposition of Compounds and Products by Santen or its Affiliates or Sublicensees; (c) the negligence or willful misconduct of any Santen Indemnitee (as defined below); or (d) any breach of any representations, warranties or covenants by Santen under this Agreement; except, in each case, to the extent such Third Party Claims fall within the scope of the indemnification obligations of Tracon set forth in Section 10.2, including, without limitation, indemnification for any breach of any representations and warranties by Tracon under this Agreement.

10.2 Indemnification of Santen. Tracon shall indemnify and hold harmless each of Santen and its Affiliates and their respective directors, officers, employees, consultants, agents and successors and assigns of any of the foregoing (the "***Santen Indemnitees***"), from and against any and all Losses incurred by any Santen Indemnitee as a result of any Third Party Claims arising directly or indirectly out of: (a) the practice by Tracon of the Santen Technology or the practice of any sublicense granted by Tracon under the Santen Technology; (b) the development, manufacture, use, handling, storage, sale or other disposition of the Compound and Products by Tracon or its Affiliates or licensees (other than Santen and its Affiliates and Sublicensees); (c) the negligence or willful misconduct of any Tracon Indemnitee; or (d) any breach of any representations, warranties or covenants by Tracon under this Agreement; except, in each case, to the extent such Third Party Claims fall within the scope of the indemnification obligations of Santen set forth in Section 10.1.

10.3 Procedure. A Tracon Indemnitee or Santen Indemnitee that intends to claim indemnification under this Article 10 (the "***Indemnitee***") shall promptly notify the indemnifying Party (the "***Indemnitor***") in writing of any Third Party Claim, in respect of which the Indemnitee intends to claim such indemnification, and the Indemnitor shall have sole control of the defense and/or settlement thereof. The indemnity arrangement in this Article 10 shall not apply to amounts paid in settlement of any action with respect to a Third Party Claim, if such settlement is effected without the consent of the Indemnitor, which consent shall not be withheld or delayed unreasonably. The failure to deliver written notice to the Indemnitor within a reasonable time after the commencement of any action with respect to a Third Party Claim shall only relieve the Indemnitor of its indemnification obligations under this Article 10 if and to the extent the Indemnitor is actually prejudiced thereby. The Indemnitee shall cooperate fully with the Indemnitor and its legal representatives in the investigation of any action with respect to a Third Party Claim covered by this indemnification.

10.4 Indemnification of RPCI Licensor. Santen shall defend, indemnify and hold harmless RPCI Licensor, its affiliates and their respective officers, trustees, employees and agents as provided in the RPCI Agreement with respect to any and all matters set forth therein to the extent arising out of or resulting from any actions or omissions of Santen or any of its Affiliates or Sublicensees.

10.5 Insurance. Each Party, at its own expense, shall maintain product liability and other appropriate insurance (or self-insure) in an amount consistent with sound business practice and reasonable in light of its obligations under this Agreement during the

Term. Each Party shall provide a certificate of insurance (or evidence of self-insurance) evidencing such coverage to the other Party upon request.

11. DISPUTE RESOLUTION

11.1 Disputes. Subject to Section 11.3, upon the written request of either Party to the other Party, any claim, dispute, or controversy as to the breach, enforcement, interpretation or validity of this Agreement (a "***Dispute***") shall be referred to a senior executive of Tracon and a senior executive of Santen. In the event that such senior executives are unable to resolve such Dispute within sixty (60) days after referral to them, the Dispute shall be referred to the Chief Executive Officer of Tracon and the Chief Executive Officer of Santen (or such executive's designee with decision-making authority) for attempted resolution. In the event such Chief Executive Officers (or designees) are unable to resolve such Dispute within sixty (60) days after referral to them, then, upon the written demand of either Party, the Dispute shall be subject to arbitration, as provided in Section 11.2, except as expressly set forth in Section 11.3.

11.2 Arbitration.

(a) Claims. Subject to Section 11.3 below, any Dispute that is not resolved under Section 11.1 within thirty (30) days after a Party's initial written request for resolution, shall be resolved by final and binding arbitration before a panel of three neutral experts with relevant industry experience. The arbitration proceeding shall be administered by the International Court of Arbitration of the International Chamber of Commerce (the "***ICC***") in accordance with its then existing arbitration rules or procedures regarding commercial or business disputes, and the panel of arbitrators shall be selected in accordance with such rules. The arbitration and all associated discovery proceedings and communications shall be conducted in English, and the arbitration shall be held in San Francisco, California. Except to the extent necessary to confirm an award or as may be required by law, neither a Party nor an arbitrator may disclose the existence, content, or results of arbitration without the prior written consent of both Parties.

(b) Arbitrators' Award. The arbitrators shall, within fifteen (15) days after the conclusion of the arbitration hearing, issue a written award and statement of decision describing the essential findings and conclusions on which the award is based, including the calculation of any damages awarded. The decision or award rendered by the arbitrators shall be final and non-appealable, and judgment may be entered upon it in any court of competent jurisdiction. Either Party may apply for interim injunctive relief with the arbitrators until the arbitration award is rendered or the controversy is otherwise resolved. The arbitrators shall be authorized to award compensatory damages, but shall not be authorized (i) to award non-economic damages, (ii) to award punitive damages or any other damages expressly excluded under this Agreement, or (iii) to reform, modify or materially change this Agreement or any other agreements contemplated hereunder; provided, however, that the damage limitations described in subsections (i) and (ii) of this sentence will not apply if such damages are statutorily imposed.

(c) Costs. Each Party shall bear its own attorneys' fees, costs, and disbursements arising out of the arbitration, and shall pay an equal share of the fees and costs of the arbitrators; provided, however, the arbitrators shall be authorized to determine whether a Party is the prevailing Party, and at their discretion, to award to that prevailing Party reimbursement for its reasonable attorneys' fees, costs and disbursements (including, for example, expert witness fees and expenses, photocopy charges, travel expenses, etc.), and/or the fees and costs of the ICC and the arbitrators.

11.3 Court Actions. Nothing contained in this Agreement shall deny either Party the right to seek, upon good cause, injunctive or other equitable relief from a court of competent jurisdiction in the context of an emergency or prospective irreparable harm, and such an action may be filed and maintained notwithstanding any ongoing dispute resolution discussions or arbitration proceedings. In addition, either Party may bring an action in any court of competent jurisdiction to resolve disputes pertaining to the validity, construction, scope, enforceability, infringement or other violations of Patents or other intellectual property rights, and no such claim shall be subject to arbitration pursuant to Section 11.2.

12. MISCELLANEOUS

12.1 Governing Law. This Agreement and any disputes, claims, or actions related thereto shall be governed by and construed in accordance with the laws of the State of California, U.S., without regard to the conflicts of law provisions thereof.

12.2 Entire Agreement; Amendment. This Agreement, including the Exhibits hereto, together with the Development Plan, sets forth all of the agreements and understandings between the Parties with respect to the subject matter hereof and thereof, and supersedes and terminates all prior agreements and understandings between the Parties with respect to the subject matter hereof and thereof. There are no other agreements or understandings with respect to the subject matter hereof, either oral or written, between the Parties. Except as expressly set forth in this Agreement, no subsequent amendment, modification or addition to this Agreement shall be binding upon the Parties unless reduced to writing and signed by the respective authorized officers of the Parties.

12.3 Relationship Between the Parties. The Parties' relationship, as established by this Agreement, is solely that of independent contractors. This Agreement does not create any partnership, joint venture or similar business relationship between the Parties. Neither Party is a legal representative of the other Party, and neither Party can assume or create any obligation, representation, warranty or guarantee, express or implied, on behalf of the other Party for any purpose whatsoever.

12.4 Non-Waiver. The failure of a Party to insist upon strict performance of any provision of this Agreement or to exercise any right arising out of this Agreement shall neither impair that provision or right nor constitute a waiver of that provision or right, in whole or in part, in that instance or in any other instance. Any waiver by a Party of a particular provision or right shall be in writing, shall be as to a particular matter and, if applicable, for a particular period of time and shall be signed by such Party.

12.5 Assignment. Except as expressly provided hereunder, neither this Agreement nor any rights or obligations hereunder may be assigned or otherwise transferred by either Party without the prior written consent of the other Party (which consent shall not be unreasonably withheld); provided, however, that either Party may assign this Agreement and its rights and obligations hereunder without the other Party's consent:

(a) in the case of either Party, in connection with the transfer or sale of all or substantially all of the business of such Party to which this Agreement relates to a Third Party, whether by merger, sale of stock, sale of assets or otherwise; provided, however, that in the event of such a transaction (whether this Agreement is actually assigned or is assumed by the acquiring party by operation of law (*e.g.*, in the context of a reverse triangular merger)), intellectual property rights of the acquiring party to such transaction (if other than one of the Parties to this Agreement) (i) existing prior to the transaction, or (ii) developed after the transaction without use of such Party's intellectual property, shall not be included in the technology licensed hereunder or otherwise subject to this Agreement; or

(b) to an Affiliate, provided that the assigning Party shall remain liable and responsible to the non-assigning Party hereto for the performance and observance of all such duties and obligations by such Affiliate.

The rights and obligations of the Parties under this Agreement shall be binding upon and inure to the benefit of the successors and permitted assigns of the Parties, and the name of a Party appearing herein will be deemed to include the name of such Party's successors and permitted assigns to the extent necessary to carry out the intent of this Section 12.5. Any assignment not in accordance with this Agreement shall be void.

12.6 No Third Party Beneficiaries. This Agreement is neither expressly nor impliedly made for the benefit of any party other than those executing it, except as expressly provided with respect to RPCI Licensor.

12.7 Severability. If, for any reason, any part of this Agreement is adjudicated invalid, unenforceable or illegal by a court of competent jurisdiction, such adjudication shall not affect or impair, in whole or in part, the validity, enforceability or legality of any remaining portions of this Agreement. All remaining portions shall remain in full force and effect as if the original Agreement had been executed without the invalidated, unenforceable or illegal part. The Parties shall use their commercially reasonable efforts to replace the invalid, illegal or unenforceable provision(s) with valid, legal and enforceable provision(s) in a way that, to the extent practicable and legally permissible, implements the original intent of the Parties.

12.8 Notices. Any notice to be given under this Agreement must be in writing and delivered either in person, by any method of mail (postage prepaid) requiring return receipt, or by overnight courier or facsimile confirmed thereafter by any of the foregoing, to the Party to be notified at its address(es) given below, or at any address such Party has previously designated by prior written notice to the other. Notice shall be deemed sufficiently given for all purposes upon the earliest of: (a) the date of actual receipt; (b) if delivered by overnight courier, the three (3) Business Days after delivery; or (d) if sent by facsimile, upon electronic confirmation of receipt.

if to Tracon:	TRACON Pharmaceuticals, Inc. 8910 University Center Lane Suite 700 San Diego, CA 92122 USA Attention: Chief Business Officer Facsimile No.: +1 858-550-0786
with a copy to:	Cooley LLP 4401 Eastgate Mall San Diego, CA 92121 USA Attention: L. Kay Chandler Facsimile No.: +1 858-550-6420
if to Santen:	Santen Pharmaceutical Co., Ltd. 4-20, Ofuka-cho, Kita-ku Osaka 533-8651 Japan Attention: Head of Global Business Development Facsimile No.: +81-6-6321-7256
with a copy to:	Santen Pharmaceutical Co., Ltd.

4-20, Ofuka-cho, Kita-ku
Osaka 530-8552Japan
Attention: Head of Intellectual Property Group
Facsimile No.: +81-6-6359-3858

12.9 Force Majeure. Each Party shall be excused from liability for the failure or delay in performance of any obligation under this Agreement by reason of any event beyond such Party's reasonable control including but not limited to acts of God, fire, flood, explosion, earthquake, or other natural forces, war, civil unrest, acts of terrorism, accident, destruction or other casualty, or any other event similar to those enumerated above. Such excuse from liability shall be effective only to the extent and duration of the event(s) causing the failure or delay in performance and provided that the Party has not caused such event(s) to occur. Notice of a Party's failure or delay in performance due to force majeure must be given to the other Party within ten (10) days after its occurrence. All delivery dates under this Agreement that have been affected by force majeure shall be tolled for the duration of such force majeure. In no event shall any Party be required to prevent or settle any labor disturbance or dispute.

12.10 No Use of RPCI Licensor Name. Nothing contained in this Agreement shall be construed as granting any right to Santen or any Affiliate or Sublicensee to use in advertising, publicity or other promotional activities any name, trade name, trademark or other designation of RPCI Licensor or any of its affiliates or their respective employees or units (including contraction, abbreviation or simulation of any of the foregoing) without the prior written consent of RPCI Licensor.

12.11 Interpretation. The headings of clauses contained in this Agreement preceding the text of the sections, subsections and paragraphs hereof are inserted solely for convenience and ease of reference only and shall not constitute any part of this Agreement, or have any effect on its interpretation or construction. All references in this Agreement to the singular shall include the plural where applicable. Unless otherwise specified, references in this Agreement to any Article shall include all Sections, subsections and paragraphs in such Article, references to any Section shall include all subsections and paragraphs in such Section, and references in this Agreement to any subsection shall include all paragraphs in such subsection. The word "including" and similar words means including without limitation. The word "or" means "and/or" unless the context dictates otherwise because the subject of the conjunction are mutually exclusive. The words "herein," "hereof" and "hereunder" and other words of similar import refer to this Agreement as a whole and not to any particular Section or other subdivision. All references to days in this Agreement shall mean calendar days, unless otherwise specified. Ambiguities and uncertainties in this Agreement, if any, shall not be interpreted against either Party, irrespective of which Party may be deemed to have caused the ambiguity or uncertainty to exist. This Agreement has been prepared in the English language and the English language shall control its interpretation. In addition, all notices required or permitted to be given hereunder, and all written, electronic, oral or other communications between the Parties regarding this Agreement shall be in the English language.

12.12 Counterparts. This Agreement may be executed in counterparts, including by transmission of facsimile or PDF copies of signature pages to the Parties or their representative legal counsel, each of which shall be deemed an original document, and all of which, together with this writing, shall be deemed one instrument.

[REMAINDER OF THIS PAGE INTENTIONALLY LEFT BLANK]

IN WITNESS WHEREOF, the Parties hereto have duly executed this **LICENSE AGREEMENT** as of the Effective Date.

TRACON PHARMACEUTICALS, INC.	**SANTEN PHARMACEUTICAL CO., LTD.**
By: /s/ Charles Theuer	By: /s/ Akira Kurokawa
Name: Charles Theuer	Name: Akira Kurokawa
Title: President and CEO	Title: President and CEO

Exhibit A-1

Patents and Applications […*…]**

[…***…]

Country	Application No.	Filing Date	Publication / Patent No.	Issue Date	Status
[…***…]	[…***…]	[…***…]			[…***…]
[…***…]	[…***…]	[…***…]	[…***…]		[…***…]
[…***…]	[…***…]	[…***…]	[…***…]		[…***…]
[…***…]	[…***…]	[…***…]	[…***…]		[…***…]
[…***…]	[…***…]	[…***…]	[…***…]		[…***…]
[…***…]	[…***…]	[…***…]	[…***…]		[…***…]
[…***…]	[…***…]	[…***…]	[…***…]		[…***…]
[…***…]	[…***…]	[…***…]	[…***…]		[…***…]
[…***…]	[…***…]	[…***…]	[…***…]		[…***…]
[…***…]	[…***…]	[…***…]			
[…***…]	[…***…]	[…***…]	[…***…]		[…***…]
[…***…]	[…***…]	[…***…]	[…***…]		[…***…]

***Confidential Treatment Requested

Exhibit A-2

Patents and Applications […*…]**

[…***…]

Country	Application No.	Filing Date	Publication / Patent No.	Issue Date	Status
[…***…]	[…***…]	[…***…]			[…***…]
[…***…]	[…***…]	[…***…]	[…***…]		[…***…]
[…***…]	[…***…]	[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]			[…***…]
[…***…]	[…***…]	[…***…]	[…***…]		[…***…]
[…***…]	[…***…]	[…***…]	[…***…]		[…***…]
[…***…]	[…***…]	[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]			[…***…]
[…***…]	[…***…]	[…***…]	[…***…]		[…***…]
[…***…]	[…***…]	[…***…]	[…***…]		[…***…]
[…***…]	[…***…]	[…***…]	[…***…]		[…***…]

[…***…]	[…***…]	[…***…]			[…***…]
[…***…]	[…***…]	[…***…]	[…***…]		[…***…]
[…***…]	[…***…]	[…***…]	[…***…]		[…***…]

Exhibit A-3

Patents and Applications […*…]**

[…***…]

Country	Application No.	Filing Date	Publication / Patent No.	Issue Date	Status
[…***…]	[…***…]	[…***…]	[…***…]		[…***…]
[…***…]	[…***…]	[…***…]			[…***…]
[…***…]	[…***…]	[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]	[…***…]	[…***…]
[…***…]	[…***…]	[…***…]	[…***…]	[…***…]	[…***…]

Exhibit A-4

Patents and Applications […*…]**

[…***…]

Country	Application No.	Filing Date	Publication / Patent No.	Issue Date	Status
[…***…]	[…***…]	[…***…]			[…***…]
[…***…]	[…***…]	[…***…]			[…***…]

Exhibit B

Sequence of TRC105

TRC105 […*…]**

[...***…]

***Confidential Treatment Requested

Exhibit C

U.S. Commercial Diligence Obligations

Santen shall […***…] according to the timelines as further described below. "***Estimated BLA Filing Date"*** shall mean the anticipated date of the first filing of a BLA for the first Product in the Field in the U.S. and "***Actual BLA Filing Date***" shall mean the date of the first BLA for the first Product in the Field in the U.S. is accepted for filing by the FDA.

[…*…] prior to Estimated BLA Filing Date :**

[…***…]

1. […***…]
2. […***…]
3. […***…]
4. […***…]
5. […***…]

A commercial plan will be completed that outlines the structure and timing of […***…].

As of Actual BLA Filing Date:

[…***…]:

1. […***…]
2. […***…]
3. […***…]
4. […***…]

[…*…] after Actual BLA Filing Date:**

[…***…]:

1. […***…]
2. […***…]
3. […***…]
4. […***…]

***Confidential Treatment Requested

Exhibit D

Supply Terms For […***…]

Application to Drug Substance

- Supply terms on this Exhibit D only pertain to supply of TRC105 drug substance (***"Drug Substance"***) for […***…], and do not apply to supply of […***…], or for supply of Drug Substance for […***…]. Santen will be responsible for finding a […***…] manufacturer (but Tracon can assist in this process)

CMC Development Activities and Costs

- Tracon currently has planned a number of development activities that will support continued development of the Drug Substance manufacturing process, including […***…].

· Because these activities will support both the […***…] and […***…] programs, Santen will pay for […***…]% of the costs of the […***…] and […***…] up to a maximum of $[…***…] and […***…]% of the costs of the remaining development activities (Items 2-10 in **Exhibit D-1**) up to a maximum of $[…***…], as long as Tracon continues TRC105 development in […***…]. For clarity, Santen's cost sharing for development activities conducted by Tracon with regard to TRC105 or […***…] version of TRC105 shall be limited up to $[…***…]. Tracon will regularly update the JDC with the status of these development activities, including the budget and request reimbursement from Santen for these costs once Tracon has been billed.

[…*…] Drug Substance Supply Terms**

· Tracon agrees to set aside […***…]L (approx […***…]g) of Drug Substance out of its current batch manufactured by Tracon's contract manufacturer to support Santen for […***…], […***…].

· Any additional request for Drug Substance for development use will be subject to the following notice and forecast provisions:

  - […***…] months of notice required before Drug Substance needed […***…]
  - Santen to provide Tracon a rolling updated forecast of Drug Substance needs every […***…] months at the JDC

· Any additional quantities of Drug Substance requested by Santen and provided through Tracon will be at Cost of Goods plus […***…]%

  - ***"Cost of Goods"*** means the cost of Drug Substance shipped to Santen. As used

herein, the cost of Drug Substance means (i) in the case of products and services acquired from Third Parties, payments made to such Third Parties, and (ii) in the case of manufacturing services performed by Tracon or its Affiliates, including manufacturing services in support of Third Party manufacturing, the actual unit costs of manufacture, plus the variances and other costs specifically provided for herein. Actual unit costs shall consist of […***…], all calculated in accordance with reasonable cost accounting methods, consistently applied, of Tracon or its Affiliates. […***…] shall include the costs incurred in […***…]. […***…] shall include the cost of […***…]. […***…] shall include a reasonable allocation of […***…] (not previously included in […***…]), a reasonable allocation of […***…], and a reasonable allocation of […***…]. Such allocations shall be in accordance with reasonable cost accounting methods, consistently applied, of the party performing the work.

· Tracon will not be obligated to provide any representations or warranties with respect to supply of Drug Substance manufactured by its contract manufacturer beyond those representations or warranties provided by its contract manufacturer and will be entitled to all disclaimers of warranties, limitations of liability and other limitations on liability applicable to its contract manufacturer with regard to supply of Drug Substance, provided that all such representations and warranties provided by its contract manufacturer are enforceable by Santen or enforced by Tracon for the benefit of Santen.

· Any additional work (development and/or Drug Substance manufacturing) that Santen requests outside of planned […***…] activities (ie, […***…]) will be […***…] funded by […***…].

· Quality agreement between Tracon and Santen to be negotiated and executed between the contract manufacturer, Tracon and Santen prior to […***…].

· If Tracon stops development of […***…], Tracon will have no obligation to continue to supply Drug Substance to Santen but will use commercially reasonable efforts to facilitate Santen obtaining supply of Drug Substance directly from Tracon's contract manufacturer and shall provide to Santen […***…] (i) all inventory of Compound, biological materials, chemical reagents and other materials and (ii) all information, including but not limited to, information relating to Compound or product containing the Compound, which are in the possession or control of Tracon or its Affiliates.

Drug Substance Supply […*…]**

· Santen may, in its discretion obtain supply of Drug Substance for […***…] and […***…] from a contract manufacturer, and Tracon agrees that Santen may enter into a direct relationship/contract with […***…] for such supply of Drug Substance.

· If Santen does not use […***…] for supply of Drug Substance for […***…] and […***…], Tracon and Santen agree to negotiate in good faith an agreement for the supply of Drug Substance for […***…] and […***…] prior to initiating […

***…].

Other Supply Terms

- Compliance with cGMP, ICH-guidelines etc.
- Delivery terms;
- Quality assurance and acceptance/rejection terms;
- Regulatory;
- Specifications;
- Product liability; and
- Term and termination.

***Confidential Treatment Requested

Exhibit D-1

Budgeted CMC Development Activities

Item	Activity	Rationale	Budgeted Cost	Timing
1	[…***…]	[…***…]	[…***…]	[…***…]
2	[…***…]	[…***…]	[…***…]	[…***…]
3	[…***…]	[…***…]	[…***…]	[…***…]
4	[…***…]	[…***…]	[…***…]	[…***…]
5	[…***…]	[…***…]	[…***…]	[…***…]
6	[…***…]	[…***…]	[…***…]	[…***…]
7	[…***…]	[…***…]	[…***…]	[…***…]
8	[…***…]	[…***…]	[…***…]	[…***…]
9	[…***…]	[…***…]	[…***…]	[…***…]
10	[…***…]	[…***…]	[…***…]	[…***…]
		Total Estimated Cost	**$[…***…]**	

***Confidential Treatment Requested

*****Text Omitted and Filed Separately with the Securities and Exchange Commission. Confidential Treatment Requested Under 17 C.F.R. Sections 200.80(b)(4) and 230.406.**

FIRST AMENDMENT TO LICENSE AGREEMENT

This FIRST AMENDMENT TO LICENSE AGREEMENT ("Amendment") is entered into as of December 31, 2014 (the "Amendment Effective Date") by and between Santen Pharmaceutical Co., Ltd., a company organized under the laws of Japan ("Santen") and TRACON Pharmaceuticals, Inc., a corporation organized under the laws of the State of Delaware ("Tracon").

RECITALS

A. Santen and Tracon are parties to that certain License Agreement, dated March 3, 2014 (the "Agreement").

B. The Parties have decided to amend the Agreement as set forth herein.

NOW, THEREFORE, in consideration of the foregoing premises and the mutual covenants herein contained, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Tracon and Santen hereby agree as follows:

1. **Defined Terms**. All capitalized terms not otherwise defined in this Amendment shall have the same meanings that are ascribed to them in the Agreement.

2. **Addition of Section 2.7.** The following provision is added into the Agreement as Section 2.7:

"**2.7 Consulting Services.** Each Party agrees to provide the Consulting Services (as defined below) to the other Party, as reasonably requested in writing by the other Party. Such Consulting Services may be provided through email correspondence, in-person meetings or video/audio conferences. The Party requesting the Consulting Services shall reimburse the other Party at a rate of […***…] U.S. dollars (U.S.$[…***…]) per hour within thirty (30) days after receipt of reasonably detailed timesheets and an invoice therefor, such invoice to be issued by the tenth (10th) day of the month following the end of each calendar quarter; provided, that in no event shall the Consulting Services exceed […***…] hours during any calendar quarter. For purposes of this provision, "Consulting Services" shall mean (i) provision of information regarding development and regulatory activities with respect to the Products and Tracon Products except for information exchanged through the JDC, (ii) provision of any safety information with respect to the Products and Tracon Products at the request of a Party other than the information exchanged under a safety data exchange agreement entered into by the Parties pursuant to Section 3.2(c), (iii) provision of regulatory support with respect to the Products and Tracon Products including, without limitation, review of the regulatory documents (IND, BLA etc.), participation in meetings with Regulatory Authorities (including the FDA) and responding to inquiries from any Regulatory Authority, (iv) services in connection with the shipping (including necessary support) of reagent and TRC105 sample supply for non-clinical/CMC purposes, and (v) services related to coordination (including scheduling of activities, shipping activities and negotiation of agreements) with Tracon's contract manufacturer."

3. **Continuing Effect.** All references to the "Agreement" in the Agreement shall hereinafter refer to the Agreement as amended by this Amendment. Except as specifically amended by this Amendment, the Agreement shall remain in full force and effect in accordance with its terms. Sections or other headings contained in this Amendment are for reference purposes

---

only and shall not affect in any way the meaning or interpretation of this Amendment; and no provision of this Amendment shall be interpreted for or against any Party because that Party or its legal representative drafted the provision.

4. **Counterparts.** This Amendment may be executed in counterparts with the same force and effect as if each of the signatories had executed the same instrument.

[Signature Page Follows]

IN WITNESS WHEREOF, the Parties have executed this Amendment as of the Amendment Effective Date.

TRACON PHARMACEUTICALS, INC.	**SANTEN PHARMACEUTICAL CO., LTD.**
By: /s/ Charles P. Theuer, M.D., Ph.D.	By: /s/ Akira Kurokawa
Name: Charles P. Theuer, M.D., Ph.D.	Name: Akira Kurokawa
Title: President & Chief Executive Officer	Title: President & Chief Executive Officer

QuickLinks -- Click here to rapidly navigate through this document

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the reference to our firm under the caption "Experts" and to the use of our report dated August 8, 2014 (except for the reverse stock split described in Note 10, as to which the date is January 20, 2015) in Amendment No. 1 to the Registration Statement (Form S-1 No. 333-201280) and related Prospectus of TRACON Pharmaceuticals, Inc. for the registration of shares of its common stock.

/s/ Ernst & Young LLP

San Diego, California
January 20, 2015

QuickLinks