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

FORM 10-K

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2017

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission File Number 001-36818

TRACON Pharmaceuticals, Inc.

(Exact Name of Registrant as Specified in Its Charter)

Delaware	**34-2037594**
(State or Other Jurisdiction of Incorporation or Organization)	**(IRS Employer Identification No.)**
4350 La Jolla Village Drive, Suite 800, San Diego CA	**92122**
(Address of Principal Executive Offices)	**(Zip Code)**

(858) 550-0780
(Registrant's Telephone Number, Including Area Code)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, par value $0.001 per share	**The NASDAQ Stock Market LLC**

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒.

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☐

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

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☒

Indicate by check mark whether the registrant is a shell company (as defined by Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of June 30, 2017, the last business day of the registrant's most recently completed second fiscal quarter, the aggregate market value of the registrant's common stock held by non-affiliates of the registrant was approximately $32.7 million, based on the closing price of the registrant's common stock on the NASDAQ Global Market on June 30, 2017 of $2.40 per share.

The number of outstanding shares of the registrant's common stock as of February 9, 2018 was 17,749,947.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant's proxy statement to be filed with the Securities and Exchange Commission pursuant to Regulation 14A in connection with the Registrant's 2017 Annual Meeting of Stockholders, which will be filed subsequent to the date hereof, are incorporated by reference into Part III of this Form 10-K. Such proxy statement will be filed with the Securities and Exchange Commission not later than 120 days following the end of the Registrant's fiscal year ended December 31, 2017.

TRACON Pharmaceuticals, Inc.

FORM 10-K — ANNUAL REPORT
For the Fiscal Year Ended December 31, 2017

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PART I

Forward-Looking Statements

This Annual Report on Form 10-K, or this Annual Report, 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 Annual Report include, but are not limited to, 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 development and 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 impact 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; and
- our ability to realize the anticipated benefits associated with our capital efficiency focused initiatives.

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 Annual Report 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.

We qualify all of the forward-looking statements in this Annual Report 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.

Item 1. Business.

Overview

We are a biopharmaceutical company focused on the development and commercialization of novel targeted therapeutics for cancer and wet age-related macular degeneration, or wet AMD. 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 required for solid cancer growth and wet AMD. We are developing our lead product candidate, TRC105 (carotuximab), an endoglin antibody, 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. 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. TRC105 has been studied in ten completed Phase 2 clinical trials and three completed Phase 1 clinical trials, and is currently being dosed in one Phase 3 clinical trial, five Phase 2 clinical trials and three Phase 1 clinical trials. Our TRC105 oncology clinical development plan is broad and involves a tiered approach. We are initially focused on angiosarcoma which is a tumor that highly expresses endoglin, the target of TRC105, and therefore may be more responsive to treatment with TRC105. We have seen complete durable responses in this tumor type and are currently enrolling the international multicenter Phase 3 TAPPAS trial in angiosarcoma. We obtained Special Protocol Assessment (SPA) agreement from the U.S. Food and Drug Administration (FDA) on our clinical trial design for the Phase 3 trial in angiosarcoma and also incorporated scientific

advice from the European Medicines Agency (EMA) regarding the adequacy of the trial design. We also received orphan drug designation from the FDA and the EMA for TRC105 for the treatment of soft tissue sarcoma, including angiosarcoma, in 2016.

The next tier of TRC105 development includes two ongoing Phase 2 trials; one in renal cell carcinoma, which is a randomized trial expected to produce top-line data in mid-2018, and another in hepatocellular carcinoma, that is expected to produce top-line data in the first half of 2019. Positive data from either of these Phase 2 trials could enable Phase 3 development. We consider these 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.

Finally, the third tier of TRC105 development includes large indications including ongoing Phase 1 trials in lung cancer, a Phase 1/2 trial in breast cancer and a Phase 2 trial in prostate cancer. Positive data in these larger indications would enable further development. In addition, based on positive preclinical data that we expect to be presented in 2018, we initiated dosing of a Phase 1 trial of TRC105 in combination with Opdivo® (nivolumab), an inhibitor of the programmed death receptor 1 (or PD-1) checkpoint pathway, in patients with lung cancer.

In December 2017, we granted Ambrx, Inc. (Ambrx) exclusive rights to develop and commercialize TRC105 in all indications (excluding ophthalmology) in China (including Hong Kong and Macau) and Taiwan. We received an upfront payment of $3.0 million, and are eligible to receive development and regulatory milestones of up to $10.5 million, and commercial sales milestones of up to $130.0 million. We are also eligible to receive tiered royalties from the high single digits to low teens on net sales of TRC105 in the Ambrx territories. We expect Ambrx to file an Investigational New Drug application with China's FDA for the initiation of clinical trials with TRC105 for patients with angiosarcoma in 2018, and to lead development of TRC105 in hepatocellular carcinoma, a disease which is more common in China than in Western countries.

We have produced a formulation of TRC105 (called DE-122 for ophthalmology indications), which is 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 endoglin antibodies, including TRC105, for ophthalmology indications. In June 2015, Santen filed an Investigational New Drug, or IND, application with the FDA for the initiation of clinical studies for DE-122 in patients with wet AMD. The Phase 1/2 PAVE trial of DE-122 was successfully completed in 2017 and top line safety and bioactivity data were presented at the 15th Annual Angiogenesis, Exudation, and Degeneration meeting on February 10 in Miami, Florida organized by the Bascom Palmer Eye Institute. The open-label, dose-escalation, sequential-cohort Phase 1/2 study assessed the safety, tolerability and bioactivity, of a single intravitreal injection of DE-122 at four dose levels in 12 patients (n=3 per dose) with wet AMD refractory to VEGF inhibitors. Serious adverse events were not reported. One adverse event of yellowish deposits in the vitreous was reported to be related to DE-122 in cohort 2 of 4, that spontaneously resolved. Eight of twelve refractory wet AMD patients demonstrated signs of bioactivity, as evidenced by improved visual acuity, decreased macular edema or decreased fluorescein leak by angiography, following treatment with DE-122 followed by a single dose of the VEGF inhibitor treatment used prior to study entry. In July 2017, Santen initiated the Phase 2a AVANTE clinical study of DE-122 for the treatment of patients with wet AMD. The Phase 2a AVANTE study is a randomized controlled trial assessing the efficacy and safety of repeated intravitreal injections of DE-122 in combination with Lucentis® (ranibizumab) compared to Lucentis monotherapy in patients with wet AMD.

Our second clinical stage product oncology candidate is TRC102, a small molecule being developed for the treatment of mesothelioma, lung cancer and glioblastoma. TRC102 is in clinical development to reverse resistance to specific chemotherapeutics by inhibiting base-excision repair, or BER. In initial clinical trials of more than 100 patients, TRC102 has shown good tolerability and promising anti-tumor activity in combination with alkylating and antimetabolite chemotherapy, including agents approved for the treatment of lung cancer and glioblastoma. TRC102 is being studied in Phase 2 trials with Temodar (temozolomide) in patients with glioblastoma, with Temodar in patients with ovarian, colorectal and lung cancer, and with Alimta (pemetrexed) in patients with mesothelioma, in addition to two ongoing Phase 1 trials.

We are also developing TRC253 and TRC694, small molecule compounds we licensed from Janssen Pharmaceutica N.V. (Janssen) in September 2016. TRC253 is being developed for the treatment of men with prostate cancer, and is a novel small molecule high affinity competitive inhibitor of wild type androgen receptor (AR) and multiple AR mutant receptors containing point mutations that cause drug resistance to currently approved treatments. We filed an IND in December 2016, which was cleared by the FDA in January 2017, and initiated a Phase 1/2 clinical trial for the treatment of metastatic castration-resistant prostate cancer in March 2017. We expect to open the Phase 2 portion of this study in mid-2018 and complete the Phase 2 portion of the trial in 2019. Until 90 days after we complete the initial Phase 1/2 study, Janssen has an exclusive option to reacquire full rights to TRC253 for an upfront payment of $45.0 million to us, and obligations to make regulatory and commercialization milestone payments totaling up to $137.5 million upon achievement of specified events and a low single-digit royalty. If Janssen does not exercise its exclusive option to reacquire the program, we would then retain worldwide development and commercialization rights, in which case we would be obligated to pay Janssen a total of up to $45.0 million in development and regulatory milestones upon achievement of specified events, in addition to a low single digit royalty.

TRC694 is a novel, potent, orally bioavailable inhibitor of NF-kB inducing kinase (NIK), which is intended for the treatment of patients with hematologic malignancies, including myeloma. We are conducting preclinical activities, including formulation development and expect to file an IND for TRC694 in 2019.

We operate a product development platform that emphasizes capital efficiency. Our experienced clinical operations, data management, quality assurance 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 minimize the costs associated with hiring contract research organizations, or CROs, to manage clinical, regulatory and database aspects of the clinical trials that we sponsor. In our experience, this model has resulted in capital efficiencies and improved communication with clinical trial sites, which expedites patient enrollment and access to patient data as compared to a CRO-managed model, and we have leveraged this capital efficient model in our international clinical trials. In addition, we have an experienced chemistry, manufacturing and controls (CMC) group that completes our product development platform.

We have collaborated with the National Cancer Institute (NCI), which selected TRC105 and TRC102 for federal funding of clinical development, as well as Case Western Cancer Center (Case Western), the University of Alabama – Birmingham and Cedars-Sinai Medical Center. Under these collaborations, NCI sponsored or is sponsoring ten completed or ongoing clinical trials of TRC105 and TRC102, Case Western sponsored two clinical trials of TRC102, the University of Alabama – Birmingham is sponsoring one clinical trial of TRC105, and Cedars-Sinai Medical Center is sponsoring one clinical trial of TRC105. All TRC105 NCI sponsored trials have been completed. If merited by Phase 2 data, we expect to fund additional 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 table summarizes key information regarding ongoing development of our product candidates:

	Phase	Data Expected
TRC105		
Angiosarcoma	Phase 3	Interim analysis second half 2018
Renal Cell Carcinoma	Randomized Phase 2	Mid 2018
Gestational Trophoblastic Neoplasia (GTN)	Phase 2	2018
Hepatocellular Carcinoma	Phase 1/2	2019
Lung Cancer (with Opdivo)	Phase 1	2018
Breast Cancer	Phase 1/2	2018
Lung Cancer	Phase 1	2018
Prostate Cancer	Phase 2	2019
Wet AMD (Santen) (DE-122)	Randomized Phase 2	2019
TRC102		
Mesothelioma	Phase 2	2019
Glioblastoma	Phase 2	2018
Solid tumors	Phase 1	2019
Solid tumors and Lymphomas	Phase 1/2	2018
Lung Cancer	Phase 1	2019
TRC253		
Prostate Cancer	Phase 1/2	2018

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 the initial tier of clinical development of TRC105 on oncology indications that highly express endoglin and have demonstrated durable complete responses to treatment, and have potential reduced time to regulatory approval.*** We initiated dosing in 2017 and are currently enrolling our international multicenter randomized Phase 3 TAPPAS clinical trial of TRC105 in angiosarcoma, a type of soft tissue sarcoma that highly expresses endoglin, in combination with the approved VEGF inhibitor Votrient® (pazopanib) versus single agent Votrient. We expect an interim analysis in the second half of 2018 that will determine the final sample size and expect top line data in 2019. We obtained SPA agreement from the FDA on our clinical trial design for the Phase 3 TAPPAS trial in angiosarcoma and also incorporated scientific advice from the EMA regarding the adequacy of the trial design. The primary endpoint of the trial is

progression-free survival, or the time a patient lives without the cancer progressing, rather than overall survival. A progression-free survival primary endpoint can be achieved sooner than an overall survival endpoint, thereby reducing the time to complete the clinical trial and submit applications for regulatory approval. We also received orphan drug designation from the FDA and the EMA for TRC105 for the treatment of soft tissue sarcoma, including angiosarcoma, in 2016.

- ***Focus the second tier of clinical development of TRC105 on oncology indications that have potential reduced time to regulatory approval.*** We plan to continue ongoing Phase 2 development of TRC105 in combination with approved VEGF inhibitors in the oncology indications of renal cell carcinoma and hepatocellular carcinoma, both of which are associated with reduced time to achieve the endpoints necessary for regulatory approval, with the goal of enabling one or more Phase 3 clinical trials in these indications. The FDA has granted approval for drugs in renal cell carcinoma based on a primary endpoint of progression-free survival (PFS), rather than overall survival. Although the endpoint for approval for hepatocellular carcinoma is overall survival, this endpoint is typically reached sooner for hepatocellular carcinoma than for many other solid tumors. We expect top line PFS data from the randomized trial in renal cell cancer in the mid-2018. We reported early response data from the multicenter trial of TRC105 and sorafenib in hepatocellular carcinoma in January 2018 and expect to report full data in 2019.

- ***Focus the third tier of clinical development of TRC105 on 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. We initiated dosing in a Phase 1 trial of TRC105 in combination with Opdivo in lung cancer in 2017, a Phase 1 trial of TRC105 in combination with chemotherapy and Avastin® in lung cancer in 2016 and a Phase 1/2 trial of TRC105 with Afinitor® (everolimus) and Femara® (letrozole) in breast cancer in 2016. We expect top-line data in the lung cancer studies and breast cancer study in 2018 and if positive, could enable further development.

- ***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. If merited by Phase 2 data, we expect to fund additional 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 would sponsor Phase 3 clinical trials in additional indications.

- ***Support Santen during clinical development to advance DE-122 in wet AMD.*** We are using our expertise in the development of endoglin antibodies to assist Santen in the development of DE-122. Santen filed an IND in June 2015 for the development of DE-122, reported safety and bioactivity data from the Phase 1/2 PAVE trial of DE-122 in February 2018, and is currently enrolling wet AMD patients into the Phase 2a AVANTE trial of DE-122.

- ***Support Ambrx during filing of an IND in China for TRC105 and initiation of clinical development.*** We are using our expertise to assist Ambrx in their filing of an IND in China so they may begin clinical development of TRC105 in China.

- ***Continue development of TRC253 in patients with prostate cancer.*** We filed an IND in December 2016 for TRC253 that was cleared by the FDA in January 2017, and initiated dosing in a Phase 1/2 clinical trial of TRC253 in the first half of 2017 in castration-resistant prostate cancer patients. We expect to open the Phase 2 portion of the study in mid-2018.

- ***Continue preclinical development of TRC694.*** We plan to conduct preclinical activities for TRC694 to enable filing of an IND in 2019.

- ***Leverage internal capabilities to advance other programs efficiently and cost effectively through our product development platform.*** We have assembled a management team that has contributed to the approval of seven therapeutics, including VEGF inhibitors in cancer and in wet AMD, and that has core competencies relating to clinical operations, regulatory affairs, quality assurance and CMC. 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.

Our Lead Product Candidate– TRC105

Rationale for Developing Endoglin Antibodies to Treat Cancer and Wet AMD

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 solid cancers and wet AMD, especially in combination with VEGF inhibitors. Finally, endoglin is also expressed on activated macrophages.

We believe the endoglin pathway serves as the dominant escape pathway that allows continued angiogenesis despite inhibition of the VEGF pathway. 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 2017. VEGF inhibitors are approved in the following oncology indications, among others:

- *Soft Tissue Sarcoma, including angiosarcoma.* The American Cancer Society, or the ACS, estimates there were approximately 12,000 new cases of soft tissue sarcoma in the United States in 2017 with more than 4,900 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. Votrient is also approved for angiosarcoma where there are an estimated 600 cases annually in the United States and 1,200 cases annually in the European Union.

- *Renal Cell Carcinoma.* The ACS estimates there were 63,990 new cases of renal cell carcinoma in the United States in 2017 with 14,400 deaths. Sutent® (sunitinib), 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® (axitinib) and Cabometyx® (cabozantanib), Lenvima® (levatinib) are small molecule VEGF inhibitors approved for second line treatment, Avastin is approved with interferon. Opdivo and the mammalian target of rapamycin (mTOR) inhibitors Afinitor (everolimus) and Torisel® (temsirolimus) are also approved. Inlyta was approved in 2012 for the treatment of renal cell carcinoma, with reported global sales of $339 million in 2017.

- *Hepatocellular Carcinoma.* The ACS estimates there were 40,710 new cases of hepatocellular carcinoma in the United States in 2017 with 28,920 deaths. The only drug approved in the United States for the first line treatment of hepatocellular carcinoma is the VEGF inhibitor Nexavar. In 2016, reported global sales of Nexavar were $1.0 billion worldwide. Stivarga® (regorafenib) and Opdivo are approved following prior Nexavar treatment.

- *Colorectal Cancer.* The ACS estimates there were 135,430 new cases of colon cancer or rectal cancer in the United States in 2017 with 50,260 deaths. Avastin is approved with chemotherapy for the first and second line treatment of patients with metastatic colorectal cancer, Cyramza® (ramucirumab) is approved with chemotherapy for second line treatment of patients with metastatic colorectal cancer, and Zaltrap® (ziv-aflibercept) is approved with chemotherapy for the second line treatment of patients with metastatic colorectal cancer. Stivarga (regorafenib) is approved following prior treatment with chemotherapy and VEGF inhibitor.

- *Non-Small Cell Lung Cancer.* The ACS estimates there were 222,500 new cases of lung cancer in the United States in 2017 with 155,870 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 and Cyramza is approved for the treatment of patients with metastatic non-small cell lung cancer.

TRC105 Development in Oncology

Clinical Development Overview

TRC105 is our investigational novel human chimeric IgG1 monoclonal antibody that is currently being dosed weekly or every two weeks by intravenous, or IV, infusion in clinical trials. Commercialized chimeric antibodies include Rituxan® (rituximab), Erbitux® (cetuximab) and Adcetris® (brentuximab vedotin), which collectively had reported global sales of over $7.0 billion in 2017.

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. VEGF levels are elevated following TRC105 treatment and the collective clinical data support the development of TRC105 in combination with VEGF inhibitors rather than development as a single agent. Initially, TRC105 was 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. Additionally, TRC105 may be more effective as a single agent in tumor types, including angiosarcoma, known to overexpress endoglin.

TRC105 is being studied in eight ongoing clinical trials in combination with either VEGF inhibitors, PD-1 inhibitor, chemotherapy, or anti-androgens and has been studied in 13 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)
3	Angiosarcoma	TRACON	Votrient	Randomized (Up to 200)
2*	Clear cell renal cell carcinoma	TRACON	Inlyta	Randomized (150)
2	GTN	TRACON	Avastin	Single Arm (5)
1	Lung cancer	TRACON	Opdivo	Dose escalation portion and single arm portion (up to 18)
1/2	Hepatocellular carcinoma	TRACON	Nexavar	Dose escalation portion and single arm portion (up to 33)
1/2	Breast cancer	UAB	Afinitor and Femara	Dose escalation portion and single arm portion (up to 35)
1	Lung cancer	TRACON	Taxol, Carboplatin and Avastin	Dose escalation (18)
2	Prostate cancer	Cedars-Sinai	Zytiga or Xtandi	Parallel cohort single arm (40)

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

Ongoing or Recently Completed Clinical Trials of TRC105

Phase 3 TAPPAS Randomized Clinical Trial of TRC105 with Votrient in Patients with Angiosarcoma

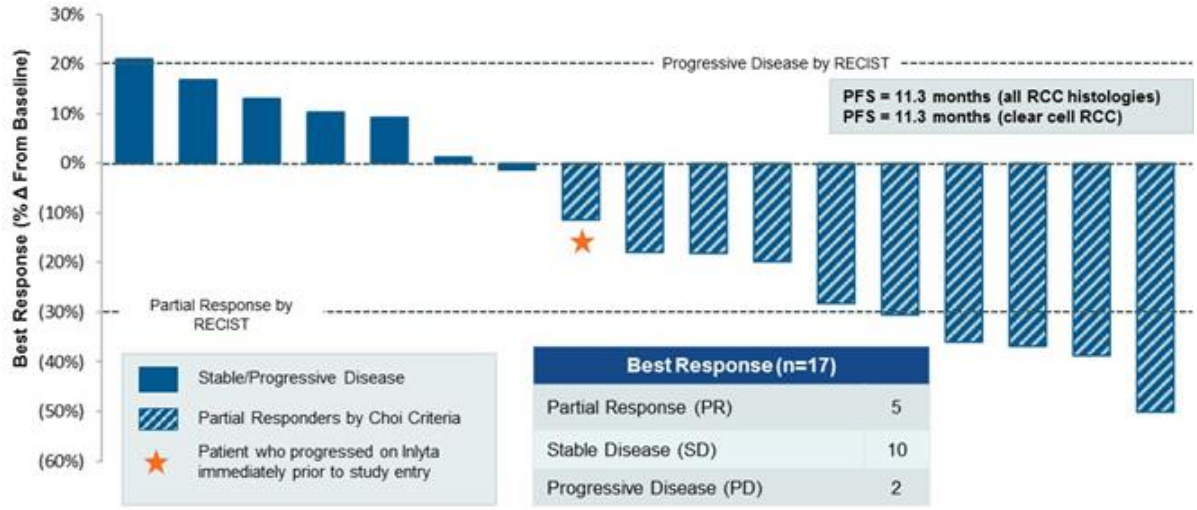
We initiated dosing in and are currently enrolling a randomized multicenter international Phase 3 TAPPAS clinical trial of TRC105 following SPA agreement from the FDA and scientific advice from the EMA regarding the adequacy of the trial design. The trial compares single agent Votrient, an approved VEGF inhibitor, to the combination of Votrient and TRC105, in patients with cutaneous and non-cutaneous angiosarcoma. The primary endpoint is PFS as assessed by Response Evaluation Criteria in Solid Tumors (RECIST) 1.1 with overall survival as a secondary endpoint. The trial is designed to enroll 124 patients to provide greater than 80% power to determine an improvement in median PFS from 4.0 to 7.3 months using a two-tailed alpha of 0.05, and includes an adaptive design, whereby the conditional power determined at the time of interim analysis may dictate an increase in the sample size to a total of 200 patients or the enrollment of 100 additional patients with cutaneous disease only. We expect the interim analysis to be completed in the second half of 2018.

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

We are conducting a two-part multicenter international Phase 2 clinical trial of TRC105 in combination with Inlyta, an approved VEGF inhibitor, in patients with advanced or metastatic renal cell carcinoma (RCC). We completed enrollment of Part 1 of the trial which was conducted at five sites in the United States and enrolled 18 patients, and based on the tolerability and anti-tumor activity observed in Part 1 of the trial, Part 2 began in November 2014. We completed enrollment of 150 advanced clear cell renal cell carcinoma patients in 2017 for the Part 2 portion of the trial at approximately 50 sites in the United States and Europe to compare TRC105 in combination with Inlyta to single agent Inlyta. The patients were randomly allocated in equal numbers to the two treatment arms, and the primary endpoint of the Part 2 portion of the trial is PFS as assessed by RECIST 1.1. We expect to perform the final analysis of PFS upon the occurrence of approximately 80 events confirmed by the independent central review committee, which should provide 80% power to detect an improvement in PFS from 4.8 months with Inlyta to 7.7 months with the combination of TRC105 and Inlyta. A planned futility analysis was cancelled in 2017 by the study's Independent Data Monitoring Committee given we had completed enrollment. We will continue to monitor total events confirmed by central review in order to continue assessing the expected timing of the data release and we currently expect to report top line PFS data from the study in mid-2018.

The updated results from the Phase 1b clinical trial combining TRC105 with Inlyta in patients with advanced or metastatic RCC were presented at the European Society for Medical Oncology (ESMO) 2016 Congress. Median PFS of 11.3 months was observed in all RCC patients in the study, including those patients with clear cell RCC, the most prevalent form of RCC. An objective response rate (ORR) of 29% was also seen in the trial. For comparative purposes, median PFS observed in the large subgroup of VEGFR TKI-refractory patients treated with Inlyta (n=194) in the Inlyta AXIS Phase 3 study in second line clear cell RCC patients (a separate trial) was 4.8 months and ORR was 11.3%.

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



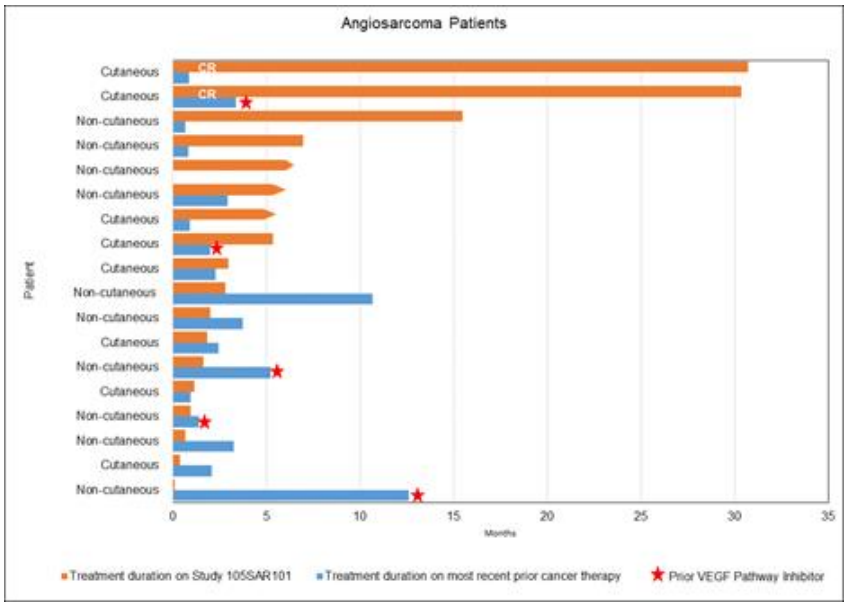
Phase 2 Clinical Trial of TRC105 with Votrient in Patients with Soft Tissue Sarcoma

We conducted a two-part Phase 2 clinical trial of TRC105 in combination with Votrient, an approved VEGF inhibitor, in patients with advanced soft tissue sarcoma. Part 1 of the trial completed enrollment of 18 evaluable patients. TRC105 and Votrient demonstrated encouraging preliminary signs of activity in a highly pretreated population, including partial responses by Choi criteria in six of 18 (33%) patients, including a complete response by RECIST 1.1 that was sustained for over two years in a patient with cutaneous angiosarcoma.

Based on the tolerability and anti-tumor activity observed, Part 2 of the trial began enrollment in September 2014. Part 2 of the trial completed accrual of the planned 63 patients at eight sites in the United States in November 2015, and top-line data indicate that median PFS unstratified by histology or tumor endoglin expression (3.9 months) was similar to the PFS expected for Votrient alone, based on data from the Votrient Phase 3 PALETTE trial in soft tissue sarcoma. However, median PFS in patients with angiosarcoma was superior to that reported in five prior trials of single agent VEGF inhibitors. Therefore, additional angiosarcoma patients were

enrolled, such that 18 in total were treated initially with the combination of TRC105 and Votrient and nine were treated with single agent TRC105 followed by the combination of TRC105 and Votrient at progression. PFS in patients treated with single agent TRC105 was similar to the PFS reported following treatment with single agent VEGF inhibitors in angiosarcoma. However, PFS and complete response rate with the combination of TRC105 and Votrient was superior to prior studies of single agent VEGF inhibitors in angiosarcoma.

Updated data were presented in November 2017 at the Connective Tissue Oncology Society (CTOS) annual meeting for the 18 angiosarcoma patients treated with the combination of TRC105 and Votrient, two of whom had complete responses to treatment. Median PFS was 7.8 months in 13 VEGF inhibitor naïve angiosarcoma patients treated with the combination of TRC105 and Votrient using either 10 mg/kg weekly dosing or the hybrid dosing schedule of TRC105. The median PFS compared favorably to the median PFS of 1.8 to 3.8 months reported in five studies of single agent VEGF inhibitors (including Votrient) in patients with angiosarcoma. In the 17 patients who received prior treatment for metastatic disease, treatment duration on TRC105 and Votrient exceeded treatment duration of the most recent prior therapy in seven of 12 VEGF naïve angiosarcoma patients and two of five patients who received a prior VEGF inhibitor as part of their most recent therapy. TRC105 administered at its recommended Phase 2 dose of 10 mg/kg weekly was well-tolerated in combination with Votrient at its approved dose, which allowed for prolonged dosing without an increase in the frequency or severity of adverse events typical of each individual drug.



Phase 1/2 Clinical Trial of TRC105 with Nexavar in Patients with Hepatocellular Carcinoma

We are currently enrolling patients with advanced or metastatic hepatocellular carcinoma in a Phase 1/2 clinical trial of TRC105 in combination with Nexavar, which is approved for the treatment of hepatocellular carcinoma. In January 2018, data were presented at the ASCO 2018 Gastrointestinal Cancers Symposium for the initial patients enrolled in the Phase 1/2 trial. Partial response, ongoing at this time, by RECIST 1.1 occurred in 2 of 8 (25%) evaluable patients and a reduction of 50% or greater in alpha fetoprotein (AFP) concentration occurred in 3 of 8 (38%) evaluable patients. Reduction in AFP, a tumor marker expressed in patients with HCC, in early treatment may help identify a favorable response to treatment and was observed in both cases of partial response. Adverse events characteristic of each drug did not increase in frequency or severity when the drugs were administered concurrently.

Phase 1 Clinical Trial of TRC105 with Opdivo in Patients with Metastatic Non-Small Cell Lung Cancer.

We initiated dosing in a Phase 1 clinical trial of TRC105 in combination with Opdivo for the treatment of non-small cell lung cancer in late 2017. The trial is enrolling up to 18 patients that have received prior chemotherapy but not received a PD-1 inhibitor previously. The primary outcome of the trial is to determine the safety and tolerability of TRC105 in combination with Opdivo in order to determine a dose for a Phase 2 trial. Endoglin is expressed on activated myeloid derived suppressor cells, and we have observed encouraging activity of TRC105, or its preclinical surrogate antibody, in combination with PD-1 inhibitors in preclinical syngeneic mouse tumor models. We expect that these preclinical data will be presented at a scientific conference in 2018 and expect to report clinical data in the second half of 2018.

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

The University of Alabama, Birmingham Cancer Center, or UAB, is conducting 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. The trial is enrolling 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 TRC105 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. We expect to report data in 2018.

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

We initiated dosing in 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 in 2016. 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. The primary endpoint of the trial is to determine whether TRC105 can be safely administered concurrently with Taxol, carboplatin and Avastin. Up to 18 patients are expected to be treated with TRC105 concurrently with Taxol, carboplatin and Avastin. Secondary endpoints include pharmacokinetics, overall response rate by RECIST 1.1, progression-free survival and overall survival.

In October 2017, initial data from non-squamous cell lung cancer patients treated with TRC105 in combination with Avastin and chemotherapy were presented at the 18th World Conference on Lung Cancer hosted by the International Association for the Study of Lung Cancer (IASLC) in Yokohama, Japan. Three of eight (37%) evaluable patients had partial responses by RECIST 1.1, including one patient who achieved an 81% reduction in tumor volume. We expect the University of Alabama - Birmingham to report additional clinical data in 2018.

Phase 2 Clinical Trial of TRC105 with Zytiga and with Xtandi in Prostate Cancer Patients Progressing on Therapy

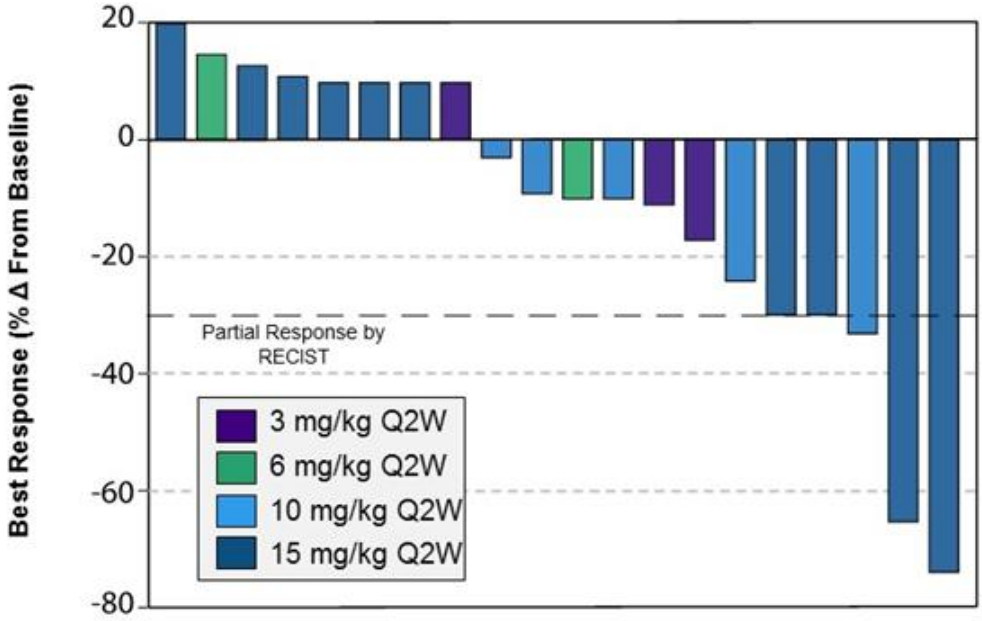
Cedars-Sinai Medical Center is conducting a Phase 2 clinical trial consisting of parallel single arm cohorts of TRC105 in combination with Zytiga (abiraterone) or TRC105 in combination with Xtandi (enzalutamide), in patients who have biochemical but not radiographic progression on prior Zytiga or Xtandi treatment, respectively. The trial is expected to enroll up to 20 patients with metastatic castrate resistant prostate cancer into each cohort. The primary outcome measure is the proportion of participants with stabilization of disease for at least 2 months or disease improvement at any time from start of combination therapy by radiographic and/or biochemical criteria through treatment completion, up to an estimated period of 24 months. We expect Cedars-Sinai Medical Center to report data in 2019.

Recently Completed Clinical Trials of TRC105

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

NCI conducted a two-part Phase 2 clinical trial of TRC105 in combination with Nexavar, an approved VEGF inhibitor, in 27 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 enrolled 22 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. The NCI published the results from the trial in 2017 in the journal *Clinical Cancer Research*. These data assessed the overall response rate by RECIST across four dose groups. All observed responses occurred in the two highest dose groups, in which 5 of 15 (33%) patients demonstrated a response. Four patients had confirmed stable disease, one of whom was treated for 22 months. Median PFS was 3.8 months (95% CI: 3.2-5.6 months) and median overall survival was 15.5 months (95% CI: 8.5-26.3 months). Nexavar was approved for the treatment of patients with advanced HCC based on median OS of 10.7 months (95% CI: 9.4-13.3 months) versus 7.9 months (95% CI: 6.8-9.1 months) with placebo in the multicenter SHARP trial. The overall response rate by RECIST for Nexavar treatment in the SHARP trial was 2%.

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



Based on these data, we initiated dosing in a multicenter Phase 1b/2 study of TRC105 in hepatocellular carcinoma and reported initial response rate data in January 2018, as described above.

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

In clinical trials as of December 31, 2017, TRC105 has been administered to more than 500 patients and was generally well tolerated as a single agent and in combination with VEGF inhibitors and chemotherapy. 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, and gastrointestinal and other symptoms during the initial infusion of TRC105, or infusion reactions. 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 considered related to TRC105 have largely been isolated events.

TRC105 does not appear to be highly immunogenic and patients with anti-drug-antibodies have not demonstrated specific clinical effects.

TRC105 Investigational New Drug Applications

We are evaluating TRC105 in the United States in clinical trials under three 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, and subsequently gestational trophoblastic neoplasia, and the third of which we filed with the FDA in June 2016 for the treatment of patients with sarcoma. 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 has also been 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 initial solid tumor IND. TRC105 is also being administered to oncology patients under investigator-sponsored and compassionate use protocols.

Translational Research

Soluble biomarker studies in patients with renal cell carcinoma in a Phase 1b trial indicated that baseline osteopontin and TGF-β receptor 3 concentrations were associated with response rate. These markers will be evaluated for correlation with efficacy in the randomized Phase 2 TRAXAR trial to assess if expression of a baseline biomarker is associated with efficacy. In the Phase 1b sarcoma trial, patients who had a greater than 10% reduction in tumor volume following treatment with TRC105 and Votrient were significantly more likely to have lower baseline levels of soluble intracellular adhesion molecule-1 and thrombospondin-2. These markers will be evaluated for correlation with efficacy in the randomized Phase 3 TAPPAS angiosarcoma trial to assess if expression of a baseline biomarker is associated with efficacy. Circulating tumor cells will also be studied in the Phase 3 TAPPAS angiosarcoma trial to assess whether endoglin expression on tumor cells at the time of treatment initiation correlate with efficacy.

Role of 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 2017, annual worldwide sales of Lucentis and Eylea for all indications totaled more than $8.0 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. At the present time, the development of agents that effectively complement approved treatment in wet AMD remains an unmet need.

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 endoglin

antibodies such as TRC105. These facts provide the rationale for treating wet AMD with a combination of endoglin antibodies and VEGF inhibitors.

DE-122 for Wet AMD

Our endoglin antibodies for ophthalmology indications are being developed in collaboration with Santen. We have produced a formulation of TRC105 for development in ophthalmology that Santen is developing under the name DE-122. In June 2015, Santen filed an IND with the FDA for the initiation of clinical studies for DE-122 in patients with wet AMD. Santen is currently enrolling the Phase 2a AVANTE clinical trial of DE-122 in wet AMD patients and top-line data are expected in 2019. In addition, safety and bioactivity data from the Phase 1/2 PAVE trial were reported at the Bascom Palmer conference on Angiogenesis, Exudation and Regeneration on February 10, 2018.

The open-label, dose-escalation, sequential-cohort Phase 1/2 study assessed the safety, tolerability, and bioactivity of a single intravitreal injection of DE-122 at four dose levels in 12 subjects (n=3 per dose) with wet AMD refractory to vascular endothelial growth factor (VEGF) inhibitors. Subjects were followed up to 90 days. No serious adverse events were reported. One adverse event of yellowish deposits in the vitreous was reported to be related to the drug, that later spontaneously resolved. The study results also suggested bioactivity of DE-122 in refractory wet AMD patients, as measured by mean change in central retinal subfield thickness (CST) based on the spectral domain optical coherence tomography (SD-OCT) or mean change in Best Corrected Visual Acuity (BCVA) letter score.

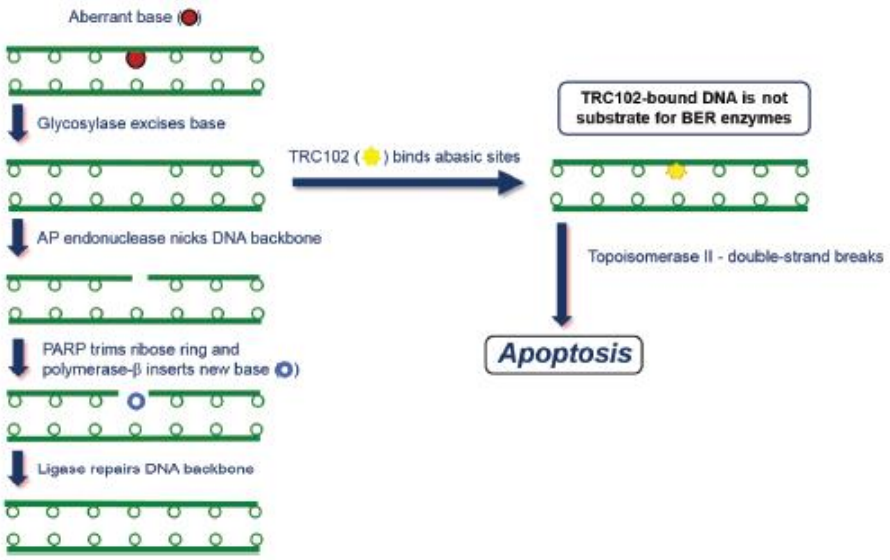
Our Second Product Candidate – TRC102

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 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 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. In initial clinical trials of more than 100 patients, TRC102 has shown good tolerability and promising anti-tumor activity in combination with alkylating and antimetabolite chemotherapy.

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.

Phase 1 ascending dose clinical trials evaluating the safety, tolerability, pharmacokinetics, pharmacodynamics and anti-tumor activity of TRC102 were completed with Alimta in patients with advanced solid tumors, with Fludara in patients with hematologic malignancy and with Temodar in patients with solid tumors. In each trial, TRC102 was tolerable with the companion chemotherapeutic, and demonstrated signs of activity. One patient treated with TRC102 and Alimta 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. Case Western reported data from a trial of intravenous TRC102 given in combination with Fludara in a Phase 1 clinical trial that were published in *Oncotarget* in 2017. Anti-tumor activity, including partial response, was noted in patients with lymphoma and chronic lymphocytic leukemia, including patients treated previously with Fludara. TRC102 combined with Fludara was safe and well tolerated. Hematologic toxicity was comparable to single agent Fludara and activity appeared to correlate with increased levels of DNA damage. Case Western reported data from a trial of TRC102 given intravenously in combination with Temodar in a Phase 1 clinical trial at the ASCO annual meeting in June 2015. Anti-tumor activity was noted in patients with ovarian cancer and neuroendocrine tumors.

The following table summarizes certain key information regarding ongoing clinical trials of TRC102 in cancer patients:

Phase	Indication	Sponsor	Companion Treatment	Design (Number of Patients)
2	Mesothelioma	NCI	Alimta	Single arm Phase 2 portion (14)
1	Solid Tumors	NCI	Alimta + Cisplatin	Dose escalation (44)
2	Glioblastoma	NCI	Temodar	Multiple arm (66)
1	Lung Cancer	NCI	Chemoradiation	Dose escalation (15)
1/2	Solid Tumors and Lymphomas	NCI	Temodar	Dose escalation and expanded cohorts (65)

The NCI reported data from the Phase 1 study of TRC102 in combination with Temodar in relapsed solid tumors and lymphoma patients at ASCO in 2017. There were no pharmacologic interactions between the two drugs and TRC102 target concentrations were achieved. Based on partial responses in patients with ovarian cancer, non-small cell lung cancer, and KRAS-positive colorectal cancer, the NCI decided to enroll expansion cohorts in each of these tumor types at the recommended Phase 2 oral dose of TRC102. The authors concluded that the combination of Temodar and TRC102 is active, and DNA damage response markers (Rad51, ϒ-H2AX and/or pNbs1) were induced in four of five paired colonic biopsies, indicating DNA damage following treatment.

Our Third Product Candidate - TRC253

TRC253 Development

TRC253 (formerly JNJ-63576253) is a novel, orally bioavailable small molecule discovered and developed by Janssen Pharmaceuticals that is a potent, high affinity competitive inhibitor of the wild type androgen receptor (AR) and multiple AR mutations, including the F877L mutation, and is under development for the treatment of men with prostate cancer. The AR F877L mutation results in an alteration in the ligand binding domain that confers resistance to current AR inhibitors, including Xtandi® (enzalutamide) and ARN-509 (apalutamide). The IND for TRC253 was filed in late 2016 and we initiated dosing in a Phase 1/2 trial in 2017 in patients with metastatic castration-resistant prostate cancer.

Activation of the AR is crucial for the growth of prostate cancer at all stages of the disease. Therapies targeting the AR have demonstrated clinical efficacy by extending time to disease progression, and in some cases, the survival of patients with metastatic castration-resistant prostate cancer. However, resistance to these agents is often observed and several molecular mechanisms of resistance have been identified, including amplification, overexpression, alternative splicing, or mutation of the AR.

Initial clinical development of TRC253 is focusing on the safety and activity in patients with resistance to current AR inhibitors, by specifically enrolling patients with mutations in the AR ligand binding domain, including F877L. AR mutations are being identified using circulating tumor DNA in the Phase 1/2 trial that will determine the recommended Phase 2 dose of TRC253, after which we plan to enroll two 30 patient cohorts in the Phase 2 portion of the study. One of the Phase 2 cohorts will consist of patients with the F877L mutation and one cohort will consist of patients with other mutations conferring resistance to Xtandi or other drugs. We expect to complete the Phase 1 portion of the trial in mid-2018 and complete the Phase 2 portion of the trial in 2019. TRC253 also potently inhibits signaling through the wild type AR and may also be developed in earlier lines of treatment as a single agent or in combination with drugs approved in prostate cancer.

TRC694 Pre-Clinical Development

TRC694 (formerly JNJ-6420694) is a novel, potent, orally bioavailable inhibitor of NF-kB inducing kinase (NIK) with the potential to be first-in-class and was discovered by Janssen. Genetic alterations leading to stabilization of NIK are found in a subset of B-cell malignancies: multiple myeloma (approximately 12-20% of cases), mantle-cell lymphoma (approximately 17% of cases), diffuse large B-cell lymphoma (approximately 9-15% of cases), classic Hodgkin's lymphoma and chronic lymphocytic leukemia. In pre-clinical studies, TRC694 selectively repressed non-canonical NF-kB gene expression and inhibited proliferation of cell lines with NIK dysregulation *in vitro* and *in vivo*. We anticipate completing formulation development and development of a companion diagnostic to enable patient-directed therapy and submitting an IND for TRC694 in 2019.

Product Development Platform

Our clinical operations, quality assurance 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 minimizes the cost associated with hiring CROs to manage clinical, regulatory and database aspects of the clinical trials that we sponsor. In our experience, this model has resulted in capital efficiencies

and improved communication with clinical trial sites, which expedites patient enrollment and facilitates access to patient data compared to a CRO-managed model. We are leveraging this capital efficient model in our recently initiated international Phase 3 TAPPAS clinical trial in angiosarcoma. In addition, we have an experienced chemistry, manufacturing and controls group that completes our product development platform.

We have also been able to advance clinical development of TRC105 and TRC102 in a capital-efficient manner through our collaboration with NCI. 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. Notably the NCI collaborated with Genentech Inc. during the development of Avastin on Phase 3 clinical trials of Avastin in lung cancer, breast cancer, ovarian cancer and renal cell carcinoma that were important elements of the resulting Avastin approval in these indications. Phase 2 clinical trials of TRC102 are being performed in collaboration with NCI, and clinical trials of TRC105 have been completed 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 would sponsor Phase 3 clinical trials in additional indications.

Collaboration and License Agreements

License Agreement with Ambrx, Inc.

In December 2017, we entered into a license agreement with Ambrx, Inc., for the development and commercialization of TRC105 in China. The license grants Ambrx the exclusive rights to use, develop, manufacture and commercialize TRC105 products in all indications (excluding ophthalmology which are held by Santen) in China (including Hong Kong and Macau) and Taiwan (the Ambrx Territory). Ambrx also has the right to grant sublicenses to affiliates and third party collaborators, provided such sublicenses are consistent with the terms of our agreement and excluding the rights licensed to us under the our license with Lonza.

Ambrx has sole responsibility for funding, developing, seeking regulatory approval for and commercializing TRC105 products in the Ambrx Territory. Ambrx has the option to either pursue a China only development strategy at their sole expense, or upon mutual agreement of us and Ambrx, participate in our ongoing global Phase 3 TAPPAS clinical trial in angiosarcoma by enrolling patients in this trial, and we may participate in an Ambrx-sponsored clinical trial in hepatocellular carcinoma, or any other indication Ambrx pursues in the Ambrx Territory.

We will own any and all discoveries and inventions made solely by us under the agreement, and Ambrx will own any and all discoveries and inventions made solely by Ambrx under the agreement. We will jointly own discoveries and inventions made jointly by us and Ambrx. We have the first right, but not the obligation, to enforce the patents licensed to Ambrx under the agreement, and Ambrx has the first right, but not the obligation, to enforce the patents it controls that are related to TRC105 products and the patents owned jointly by us and Ambrx. 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 Ambrx under the agreement, we received a one-time upfront fee of $3.0 million. In addition, we are eligible to receive up to a total of $140.5 million in milestone payments upon the achievement of certain milestones, of which $10.5 million relates to development, the submission of certain regulatory filings and receipt of certain regulatory approvals and $130.0 million relates to the achievement of specified levels of product sales. If TRC105 products are successfully commercialized in the Amrbx Territory, Ambrx 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. 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. As of December 31, 2017, none of the development milestones have been achieved.

Ambrx may unilaterally terminate the agreement for any reason or for no reason upon at least 90 days' notice to us. 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 60 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 Ambrx's payment obligations.

License Agreement with Janssen Pharmaceutica N.V.

In September 2016, we entered into a strategic licensing collaboration with Janssen for two novel oncology assets from Janssen's early oncology development portfolio. The agreement grants us the rights to develop TRC253 (formerly JNJ-63576253), a novel small molecule high affinity competitive inhibitor of wild type androgen receptor (AR Mutant Program) and multiple AR mutant receptors which display drug resistance to approved treatments, which is intended for the treatment of men with prostate cancer, and TRC694

(formerly JNJ-6420694), a novel, potent, orally bioavailable inhibitor of NF-kB inducing kinase (the NIK Program and, together with the AR Mutant Program, the Programs), which is intended for the treatment of patients with hematologic malignancies, including myeloma.

Janssen maintains an option, which is exercisable until 90 days after we demonstrate clinical proof of concept with respect to the AR Mutant Program, to regain the rights to the licensed intellectual property and to obtain an exclusive license to commercialize the compounds and certain other specified intellectual property developed under the AR Mutant Program. If Janssen exercises the option, Janssen will be obligated to pay us (i) a one-time option exercise fee of $45.0 million; (ii) regulatory and commercial based milestone payments totaling up to $137.5 million upon achievement of specified events; and (iii) royalties in the low single digits on annual net sales of AR Mutant Program products. If Janssen does not exercise the option, we would then have the right to retain worldwide development and commercialization rights to the AR Mutant Program, in which case, we would be obligated to pay to Janssen (x) development and regulatory based milestone payments totaling up to $45.0 million upon achievement of specified events, and (y) royalties in the low single digits based on annual net sales of AR Mutant Program products, subject to certain specified reductions.

With respect to the NIK Program, Janssen maintains a right, which is exercisable within 90 days following the date on which we demonstrate clinical proof of concept with respect to the NIK Program, to negotiate for a period of six months for a reversion of the related rights in the licensed intellectual property and to obtain an exclusive license to commercialize the compounds and certain other specified intellectual property developed under the NIK Program. If Janssen does not exercise its right of first negotiation, or, if after exercise of such right, Janssen and we are unable to reach an agreement on the terms of a reversion and exclusive license, and, in either case, we continue the development of the NIK Program, then we would be obligated to pay Janssen (i) development and regulatory based milestone payments totaling up to $60.0 million upon achievement of specified events, and (ii) royalties in the low single digits based on annual net sales of NIK Program products, subject to certain specified reductions.

The license agreement may be terminated for uncured breach (including failure to satisfy specified development and spending obligations we have in relation to the Programs), bankruptcy, or the failure or inability to demonstrate clinical proof of concept with respect to a particular Program during specified timeframes. In addition, the license and agreement will automatically terminate (a) with respect to the AR Mutant Program, upon Janssen exercising its option in respect of the AR Mutant Program and making payment of the option exercise fee to us or, if Janssen does not exercise the option, upon the expiration of all our payment obligations to Janssen with respect of the AR Mutant Program, and (b) with respect to the NIK Program, upon us and Janssen entering into an exclusive license agreement following Janssen's exercise of its right of first negotiation or, if Janssen's right of first negotiation with respect to the NIK Program expires and we do not enter into an exclusive license agreement, upon the expiration of all our payment obligations to Janssen with respect of the NIK Program. We may also terminate a Program or the agreement in its entirety without cause, subject to specified conditions.

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, as amended, 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. As of December 31, 2017, $10.0 million of the development milestones have been achieved and received in accordance with the agreement.

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. Under the agreement, as amended, we obtained an exclusive, worldwide license to certain patents and other intellectual property rights controlled by RPCI related to 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 an 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 endoglin antibodies, including TRC205, a humanized and deimmunized endoglin antibody, 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 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, as amended, 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 through the later of (i) the expiration of any orphan drug marketing exclusivity for a product utilizing the TRC102 Technology, (ii) August 2026, or (iii) on a country-by-country basis upon the expiration of the last valid claim under the TRC102 Technology or any patent we receive that is a derivative of the TRC102 Technology.

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 the 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 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, as amended, 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.

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 had an original five-year term, with the 2010 CRADA and the 2011 CRADA, both agreements as amended, expiring on October 14, 2018 and January 28, 2021, respectively, and the TRC102 CRADA expiring on August 7, 2020. 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.

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 and 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.

On February 22, 2017, we entered into a manufacturing agreement, or the Manufacturing Agreement, with Lonza Biologics Tuas Pte Ltd, or Lonza, for the long-term manufacture and supply of registration and commercial batches of TRC105.

Under the Manufacturing Agreement, Lonza has agreed to manufacture TRC105 pursuant to purchase orders and in accordance with the manufacturing specifications agreed upon between us and Lonza. The TRC105 drug substance will be manufactured at a Lonza facility that has not previously manufactured TRC105, and we and Lonza are obligated to cooperate to transfer the TRC105 manufacturing process to the facility. Initially, we are required to purchase and Lonza is obligated to supply certain batches prior to approval of TRC105 by the FDA or EMA. Following regulatory approval, we will be required to purchase and Lonza will be required to supply a minimum number of batches annually. In the event we cancel any purchase orders, we may be obligated to pay certain cancellation fees. In addition, we are obligated to pay a milestone fee to Lonza upon the earlier of the first approval of TRC105 by the FDA or EMA or our receipt of a complete response letter or non-approvability letter (or equivalent communication) indicating that the rejection of the marketing application was not due to a deficiency in Lonza's facility, the manufacturing process or services performed by Lonza.

The Manufacturing Agreement has an initial term beginning on the effective date and ending on the seventh anniversary of the date of first regulatory approval of TRC105 by the FDA or EMA. The Manufacturing Agreement may be renewed for an additional three years upon the written agreement of both parties no later than the fifth anniversary of the date of first approval by the FDA or EMA.

Either party may terminate the Manufacturing Agreement due to a material breach of the Manufacturing Agreement by the other party, subject to prior written notice and a cure period, due to the insolvency or bankruptcy of the other party, or due to a force majeure event that prevents performance under the Manufacturing Agreement for at least six months. We may terminate the Manufacturing Agreement, subject to 60 days' written notice, if we discontinue the TRC105 program, whether due to a notice of non-approval or withdrawal of marketing approval by a regulatory agency or otherwise. In the event of a termination by us due to discontinuation of the TRC105 program or a termination by Lonza due to our material breach or insolvency or bankruptcy, we would be obligated to pay to Lonza certain batch cancellation and/or early termination fees.

TRC105 drug product is produced by an FDA-registered contract manufacturer. 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.

TRC253 drug substance is manufactured through a standard chemical synthesis by an experienced contract manufacturer and is currently being produced at clinical scale.

TRC694 drug substance and product are currently produced at research scale manufactured through a standard chemical synthesis by an experienced contract manufacturer.

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. Amgen, Inc., Boehringer Ingelheim, Eli Lilly and Company, MedImmune LLC, OncoMed Pharmaceuticals Inc., and Roche AG are each developing non-VEGF angiogenesis inhibitors, which are in various phases of clinical development. In addition, drugs have recently been approved or are being developed that target other oncologic pathways, including immune surveillance targets, that may decrease the need for treatments, like TRC105, that target angiogenesis.

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., Clovis Oncology and Astra Zeneca each market 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.

We are developing TRC253 for the treatment of castration-resistant prostate cancer. If TRC253 is approved, it could compete with other androgen receptor inhibitors such as Xtandi, ODM-201 and apalutamide. In addition to the therapies mentioned above, there are many generic chemotherapeutics and other agents commonly used to treat prostate cancer.

We are developing TRC694 for the treatment of hematologic malignancies, including multiple myeloma. If TRC694 is approved, it could compete with other NIK inhibitors that may be developed, as well as agents targeting other pathways in hematologic malignancies.

Wet AMD Therapies

Our partner, Santen, is developing DE-122 for the treatment of wet AMD and other eye diseases. 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 wet AMD. In addition, DE-122

could face competition from other VEGF inhibitors in development, such as Allergan's VEGF inhibitor, DARPin, and Novartis' brolucizumab which are both in late stage clinical development in wet AMD.

Commercialization

We hold worldwide commercialization rights for our oncology product candidates (subject to certain rights held by Janssen for TRC253) excluding China, Hong Kong, Macau and Taiwan for TRC105, while Santen holds worldwide commercialization rights for our endoglin antibodies, including TRC105, in the field of ophthalmology. If any of our product candidates are 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 31, 2017, on a worldwide basis, includes 16 issued patents and allowed applications and 10 pending patent applications in the United States and 47 issued patents and allowed applications and 88 pending patent applications outside the United States with pending and issued claims relating to our product candidates. 36 of our issued US and foreign patents and allowed applications cover antibodies to endoglin and uses thereof 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 2035, 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/TRC205 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 the combination therapy of cancer with TRC105 and VEGF inhibitors in Australia, Canada, China, Europe, Eurasia, South Korea and Japan, an allowed application in Israel, and similar patent applications are pending in many other major jurisdictions worldwide, including the United States, Europe, Israel and India. The expected expiration date for these method-of-use patents is 2030, exclusive of possible patent term extensions.

We have pending applications covering formulations of endoglin antibodies in Australia, Brazil, Canada, China, Eurasia, Europe, Georgia, India, Indonesia, Israel, Japan, South Korea, Malaysia, Mexico, New Zealand, Philippines, Singapore, Thailand, Ukraine, the United States, Uzbekistan and Vietnam. 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 US provisional patent application directed to a combination therapy for treatment of renal cell carcinoma, brain cancer or breast cancer with an anti-endoglin antibody and a VEGF inhibitor. Also disclosed are methods of biomarker assessment prior to, during, and after treatment of an individual. The expected expiration date for any patent that may arise from these applications is 2037, exclusive of possible patent term extensions.

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

We have filed an International PCT application, a US utility application and a US continuation-in-part application from the international application directed to uses of anti-endoglin antibodies for treating fibrosis. The US continuation-in-part application has been allowed. The expected expiration date for any patent that may arise from these applications is 2035, exclusive of possible patent term extensions.

We have filed a US provisional application directed to the treatment of cancers with a combination of TRC105 and anti-programmed death receptor agents. The expected expiration date for any patent that may arise from these applications is 2038, 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 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.

TRC253 Patent Coverage

We hold an exclusive license to a PCT application and US patent application covering TRC253 and methods of using TRC253. The expected expiration date for the US case and any patents issuing from the PCT application is 2037, exclusive of possible patent term extension. We also hold a license to patent applications, filed in various jurisdictions, which are directed to methods for determining resistance to androgen receptor therapy. The expected expiration date for patents issuing from these applications is 2033.

TRC694 Patent Coverage

We hold an exclusive license to a PCT application as well as various non-PCT applications covering TRC694 and methods of using TRC694. The expected expiration date for patents issuing from these applications is 2036. We also hold a license to provisional applications covering analogs of TRC694 and their uses. These applications, if issued, are expected to expire in 2037.

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 and consultants. 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, or 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. Nonclinical testing may continue 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 for indications other than oncology. 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. A 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 a 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, the fees payable to the FDA for reviewing a BLA, as well as annual program fees 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.

The Biologics Price Competition and Innovation Act of 2009, or the BPCIA, created a pathway 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 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, and additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, any of which could adversely affect our ability to operate our business and our financial results.

Orphan Drug Act

TRC105 has received orphan drug designation for the treatment of soft tissue sarcoma, which includes angiosarcoma in the US and EU. The United States 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, will benefit, if approved, 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 Council for 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.

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 meaningful outcome as predicted by the surrogate marker trial.

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

Foreign Regulation

In addition to regulations in the United States, we and our collaborators 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 or our collaborators obtain FDA approval for a product candidate, we or our collaborators must obtain approval from the comparable regulatory authorities of foreign countries or economic areas, such as the European Union, before we or our collaborators 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 approved by the competent national health authority and by 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. 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.

In China, the China Food and Drug Administration (CFDA) monitors and supervises the administration of pharmaceutical products, as well as medical devices and equipment. In order to conduct clinical trials in China a clinical trial application must be submitted and approved by the CFDA. When clinical trials have been completed, an applicant must apply to the CFDA for approval of a new drug application. The CFDA, the Center for Drug Evaluation (CDE), and the Drug Inspection Institution will then conduct reviews and on-site inspections. The CFDA determines whether to approve the application according to the comprehensive evaluation opinions produced by the reviews and on-site inspections. We or our collaborators must obtain approval of new drug applications before our product candidates can be manufactured and sold in the Chinese market. In addition, all facilities and techniques used in the manufacture of products for clinical use or for sale in China must be operated in conformity with good manufacturing practice guidelines as established by the CFDA. Failure to comply with applicable requirements could result in the termination of manufacturing and significant fines.

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, 2017, we had 24 full-time employees and one part-time employee, 17 of whom are involved in research, development or manufacturing, and four of whom have Ph.D., Pharm.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.

Corporate and Other 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 4350 La Jolla Village Dr., Suite 800, San Diego, CA 92122, and our telephone number is (858) 550-0780. Our corporate website address is www.traconpharma.com and we regularly post copies of our press releases as well as additional information about us on our website. Information contained on or accessible through our website is not a part of this Annual Report, and the inclusion of our website address in this Annual Report is an inactive textual reference only.

This Annual Report contains references to our trademarks and to trademarks belonging to other entities. Solely for convenience, trademarks and trade names referred to in this Annual Report, including logos, artwork and other visual displays, may appear without the ® or TM symbols, but such references are not intended to indicate, in any way, that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto. 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.

Item 1A. Risk Factors.

Certain factors may have a material adverse effect on our business, financial condition and results of operations, and you should carefully consider them. Accordingly, in evaluating our business, we encourage you to consider the following discussion of risk factors, in its entirety, in addition to other information contained in this Annual Report as well as our other public filings with the Securities and Exchange Commission.

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 $19.1 million and $27.0 million for the years ended December 31, 2017 and 2016, respectively. At December 31, 2017, we had an accumulated deficit of $104.7 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 additional clinical development and manufacturing activities for TRC105.

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 U.S. Food and Drug Administration, or 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.

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. There is substantial doubt as to our ability to continue as a going concern.

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 and TRC253, and conduct manufacturing activities for TRC105.

At December 31, 2017, we had cash, cash equivalents and short-term investments totaling $34.5 million. Based upon our current operating plan, we believe that our existing cash, cash equivalents and short-term investments will enable us to fund our operating expenses and capital requirements through mid-2018. We will need additional funding to complete the development and commercialization of our product candidates, specifically our lead product candidate, TRC105, including for the completion of our Phase 3 TAPPAS trial in angiosarcoma. In addition, in 2016 we licensed two early-stage oncology programs from Janssen Pharmaceutica N.V. (Janssen) and are subject to obligations to develop the programs through clinical proof of concept. We will need additional funds to complete clinical proof of concept for the programs and, to the extent we retain the programs afterwards, to advance the programs through later stages of development. As more fully discussed in Note 1 to the consolidated financial statements included in this report, the uncertainties around our ability to obtain additional funding raise substantial doubt regarding our ability to continue as a going concern for a period of one year following the date that these financial statements were issued.

Regardless of our expectations, 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.

In February 2016, we entered into an At-the-Market Equity Offering Sales Agreement, or the Stifel Agreement, with Stifel, Nicolaus & Company, Incorporated, or Stifel, pursuant to which we may sell from time to time, at our option, up to an aggregate of $25.0 million of shares of our common stock through Stifel, as sales agent, subject to limitations on the amount of securities we may sell under our effective registration statement on Form S-3 within any 12 month period. In March 2017, we entered into a Common Stock Purchase agreement, or the Aspire Agreement, with Aspire Capital Fund, LLC, or Aspire, pursuant to which, upon the terms and subject to the conditions and limitations set forth in the Aspire Agreement, Aspire committed to purchase up to an aggregate of $21.0 million of shares of our common stock at our request from time to time. As of the date of this report, we have sold a total of $3.5 million of shares of our common stock under the Stifel Agreement and $1.0 million of shares under the Aspire Agreement. While the Stifel and Aspire agreements provide us with additional options to raise capital through sales of our common stock, there can be no guarantee that we will be able to sell shares under either agreement in the future, or that any sales will generate sufficient proceeds to meet our capital requirements. In particular, Stifel is under no obligation to sell any shares of our common stock that we may request to be sold under the Stifel Agreement from time to time, and while Aspire is obligated to purchase shares of our common stock under the Aspire Agreement, the obligation is subject to our satisfaction of various conditions which we may not be able to meet in the future. If sales are made under either the Stifel Agreement or Aspire Agreement, our existing stockholders may experience dilution and such sales, or the perception that such sales are or will be occurring, may cause the trading price of our common stock to decline.

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 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 Silicon Valley Bank, or 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 January 2017, we entered into an amended loan and security agreement with SVB to borrow up to $8.0 million, all of which was used to refinance amounts outstanding under prior credit facilities with SVB. 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 3 and Phase 2 development 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 partners Santen and Ambrx or any additional future partners, will be able to obtain approval for TRC105 from the FDA or any foreign regulatory authority. We obtained Special Protocol Assessment (SPA) agreement from the FDA on our clinical trial design for the Phase 3 TAPPAS trial of TRC105 in angiosarcoma, but that agreement does not ensure that the FDA will approve TRC105 for angiosarcoma, even if the trial is successful. In addition, while we have the right to terminate our long-term manufacturing agreement with Lonza Sales AG, or Lonza, if we were to cease the TRC105 program, we may still be required to pay batch cancellation fees that could harm our financial position and ability to continue development of our other drug candidates. Even if TRC105 is approved, if it is not approved in indications that justify the minimum number of batches we are required to purchase from Lonza following regulatory approval, our ability to commercialize TRC105 profitably would be harmed.

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. For example, we determined that we will not achieve the projected 115 events of progression or death by central radiographic review, which will decrease the statistical power of our ongoing randomized Phase 2 clinical trial of TRC105 and Inlyta in renal cell carcinoma, which will decrease the power of the trial to detect a statistically significant improvement in efficacy versus Inlyta alone. 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 clinical trials of TRC105 demonstrate unexpected safety issues, do not achieve the primary efficacy endpoints or are terminated prior to completion due to analysis of interim results, 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 enrollment caused by the availability of alternative treatments;
- 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 in our ability to acquire 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. 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. The most common AE identified in our clinical trials of TRC102 has been anemia. TRC253 has not previously been tested in humans, and it is possible that we could observe AEs in our Phase 1 study of TRC253 that would preclude further development or cause Janssen to not exercise its option to regain rights to the program.

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. In addition, we believe that TRC105 may be most effective as a treatment of solid tumors, such as angiosarcoma, which expresses high levels of endoglin. We previously analyzed endoglin expression on archival tumor tissue across various sarcoma subtypes and did not find a correlation between endoglin expression and response to TRC105 treatment in sarcoma subtypes other than angiosarcoma. We believe that this analysis may have limited utility due to tumor heterogeneity, the long period of time between sampling and treatment, and the effects of tumor evolution resulting from prior treatment. If we are unable to establish a correlation between endoglin expression and response to TRC105 treatment in subsequent analyses or to identify additional tumor types that express endoglin, our ability to successfully identify target patient populations for future clinical development or to expand TRC105's market potential may be limited.

We also expect to target specific patient populations with TR253 and TRC694 and expect to continue to develop companion diagnostic tests in prostate cancer and myeloma/lymphoma, respectively, to improve selection of susceptible patients. If we are unable to establish a companion diagnostic for either of these treatments, our ability to successfully identify target patient populations for future clinical development may be limited.

We have not previously submitted a BLA or 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 additional product candidates from the FDA, or Fast Track designation may not actually lead to a faster development or regulatory review or approval process.

We received Fast Track designation for TRC105 in renal cell carcinoma in May 2015 and we intend to seek Fast Track designation or other appropriate expedited development options for our eligible product candidates in other indications. 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. Despite our receipt of Fast Track designation for TRC105 in renal cell carcinoma, and even if additional 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 also 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 efforts to obtain additional orphan drug designations from the FDA for our product candidates or may not ultimately realize the potential benefits of orphan drug designation.

We received orphan drug designation for TRC105 in soft tissue sarcoma in 2016 in the US and EU and we intend to seek orphan drug designation for our eligible product candidates in other indications. 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. Despite our receipt of orphan drug designation for TRC105 in soft tissue sarcoma, we cannot guarantee that we will be able to receive orphan drug status from the FDA for any other product candidates or indications. For example, we previously withdrew an application for orphan drug designation in GTN. If we are unable to secure orphan drug designation for additional product candidates or indications, our regulatory and commercial prospects may be negatively impacted.

Despite orphan drug exclusivity, the FDA can still approve another drug containing the same active ingredient and used for the same orphan indication if it determines that a subsequent drug is safer, more effective or makes a major contribution to patient care, and orphan exclusivity can be lost if the orphan drug manufacturer is unable to assure that a sufficient quantity of the orphan drug is available to meet the needs of patients with the rare disease or condition. Orphan drug exclusivity may also be lost if the FDA later determines that the initial request for designation was materially defective. In addition, orphan drug exclusivity does not prevent the FDA from approving competing drugs for the same or similar indication containing a different active ingredient. If orphan drug exclusivity is lost and we were unable to successfully enforce any remaining patents covering our eligible product candidates, we could be subject to generic competition earlier than we anticipate. In addition, if a subsequent drug is approved for marketing for the same or a similar indication as any of our product candidates that receive marketing approval, we may face increased competition and lose market share regardless of orphan drug exclusivity.

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 of our product candidates for which we receive regulatory approvals 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 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 with drug substance for preclinical and clinical trials. Moreover, the market for contract manufacturing services for drug products, including biologics such as TRC105 and small molecules such as TRC253 and TRC694, 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, which could result in delays in initiating or completing clinical trials or our ability to apply for or receive regulatory approvals.

For TRC105, we have relied on Lonza for drug substance clinical supply manufacture. In addition, we rely on other third parties to perform additional steps in the manufacturing process, including filling into vials, shipping and storage. For our clinical stage pipeline programs, while we believe that our existing supplies of drug product and our contract manufacturing relationships will be sufficient to accommodate clinical trials through Phase 3 for TRC105, Phase 2 for TRC102, and to proof of concept for TRC253, there can be no guarantee that lack of clinical supplies will not force us to delay or terminate any of our ongoing or planned clinical trials.

We also expect to continue to rely on third party manufacturers for any drug required for commercial supply, and do not intend to build our own manufacturing capability. Successfully transferring complicated manufacturing techniques to contract manufacturing organizations and scaling up these techniques for commercial quantities is costly, time consuming and subject to potential difficulties and delays. For example, we rely on Lonza to manufacture TRC105 drug substance 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 under specified conditions, 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. In February 2017 we entered into a long-term manufacturing agreement with an affiliate of Lonza for the manufacture of TRC105 drug substance intended for registration batches and future commercial supply if TRC105 receives regulatory approval. As part of the manufacturing agreement, we and Lonza will need to transfer the TRC105 manufacturing process to a separate Lonza facility. This transfer may result in setbacks in replicating the current manufacturing process at a new facility that has not previously manufactured TRC105. In particular, for biologics, it is not uncommon to experience setbacks and delays in process transfer, which may delay our ability to obtain regulatory approval or may result in higher costs to manufacture commercial drug product than we currently expect.

Other than our TRC105 manufacturing agreement with Lonza, we do not have any long-term supply agreements for the manufacture of our product candidates and cannot guarantee that Lonza or any other third party manufacturer would be willing to continue supplying drug product for clinical trials or commercial sale at a reasonable cost or at all. In addition, our manufacturing agreement with Lonza may be terminated early by Lonza if we are in material breach of the agreement, subject to prior written notice

and a cure period, due to our insolvency or bankruptcy, or due to a force majeure event that prevents performance under the agreement for at least six months.

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, we may experience delays in initiating planned clinical trials and we may 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.

We depend in part on NCI and other third party sponsors to advance clinical development of TRC105 and TRC102.

NCI is currently sponsoring and funding multiple clinical trials involving TRC102. The University of Alabama, Birmingham Cancer Center, or UAB, is also funding trials with TRC105 in breast cancer and lung cancer. In addition, Case Western has sponsored and funded 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. None of these third party sponsors are obligated to continue sponsorship or funding of any clinical trials involving our product candidates and could stop their support at any time. If these third party sponsors 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 these third party sponsors 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, execution 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 a third party sponsor due to poor design of the trial, errors in the way the clinical trial is executed or any other reason, or if the sponsor fails to comply with applicable regulatory requirements or there are errors in the reported data, 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, these third party sponsors 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 third party sponsors, which could prevent us from disclosing current information about the progress or results from these trials until the applicable sponsor publicly discloses such information or permits 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 endoglin antibodies, including DE-122, in the field of ophthalmology and on our license agreement with Ambrx to develop and commercialize TRC105 in China and Taiwan. The failure to maintain our license agreements or the failure of our licensees to perform their obligations under the agreements, 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 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 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. Pursuant to the terms of our license agreement with Ambrx, we granted Ambrx an exclusive license to TRC105 in China and Taiwan for all indications other than ophthalmology. We have limited control over the amount and timing of resources that Santen or Ambrx will dedicate to their respective efforts. In particular, we will not be entitled to receive additional milestone or royalty payments from Santen absent further development and eventual commercialization of endoglin antibodies in ophthalmology indications or from Ambrx absent further development and eventual commercialization of TRC105 in China or Taiwan.

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

- our licensees may not comply with applicable regulatory requirements with respect to developing or commercializing products under the license agreements, which could adversely impact development, regulatory approval and eventual commercialization of such products;
- we and our licensees could disagree as to future development plans and our licensees may delay initiation of clinical trials or stop a future clinical trial;
- there may be disputes between us and our licensees, 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 licensed products using our technology, and/or costly litigation or arbitration that diverts our management's attention and resources;
- our licensees 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 TRC105, including TRC105, in non-ophthalmology indications;
- business combinations or significant changes in Santen's or Ambrx's business strategy may adversely affect Santen's or Ambrx's ability or willingness to perform their respective obligations under the license agreements;
- our potential license partners may not properly maintain or defend our intellectual property rights in their licensed fields or territories 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 and Ambrx may be reduced or eliminated based upon their and our ability to maintain or defend our intellectual property rights.

The license agreements are subject to early termination, including through Santen's or Ambrx's right to terminate without cause upon advance notice to us. If the agreements are terminated early, we may not be able to find another collaborator for the commercialization and further development of our endoglin antibodies for ophthalmology indications or for TRC105 in ophthalmology, 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. For example, if Janssen exercises its option to reacquire rights to TRC253, we would be entitled to receive a pre-negotiated up-front fee from Janssen, but we would be dependent on Janssen to further develop the program in order to receive any further value in the form of milestone payments or royalties.

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 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.

We do not have our own capabilities to perform preclinical testing of our product candidates, and therefore rely entirely on third party contractors and laboratories to conduct these studies for us. In addition, while we intend to continue designing, monitoring and

managing our 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. We will compete with many other companies for the resources of these third party contractors, laboratories, investigators, collaborators, and the initiation and completion of our preclinical studies and clinical trials may be delayed if we encounter difficulties in engaging these third parties or need to change service providers during a study or 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 preclinical studies and clinical trials. Nevertheless, we are responsible for ensuring that each of our clinical trials and certain of our preclinical studies 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. With respect to clinical trials, 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 preclinical studies and 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 preclinical and 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 protocols or regulatory requirements or for other reasons, our preclinical studies and 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 preclinical studies and 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 development timelines.

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 December 31, 2017, we are the exclusive licensee of six issued U.S. patents, two pending U.S. patent applications, and sixteen issued non-U.S patents and two-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." We are also the exclusive licensee of pending applications, which have not yet published, related to TRC253 and TRC694.

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. TRC105 is protected by patents exclusively in-licensed from Roswell Park Cancer Institute. TRC102 is protected by patents exclusively licensed from Case Western. TRC253 and TRC694 and associated intellectual property have been licensed from Janssen.

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 or diligence obligations under any such agreement, we may owe damages, our licensor may have a right to terminate the affected license, and our and our partners' 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 non-compliance 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 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. For example, the approval of Opdivo (nivolumab) and Cabometyx (cabozantinib) have decreased the use of Inlyta as a second line treatment in renal cell carcinoma.

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 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 or ACA, was enacted. Some of the provisions of the ACA have yet to be implemented, and there have been judicial and Congressional challenges to certain aspects of the ACA. Since January 2017, President Trump has signed two Executive Orders and other directives designed to delay, circumvent or loosen certain requirements mandated by the ACA. Concurrently, Congress has considered legislation that would repeal or repeal and replace all or part of the ACA. While Congress has not passed repeal legislation, the Tax Cuts and Jobs Act of 2017 includes a provision repealing, effective January 1, 2019, the tax-based shared responsibility payment imposed by the ACA on certain individuals who fail to maintain qualifying health coverage for all or part of a year that is commonly referred to as the “individual mandate”. Congress may consider other legislation to repeal or replace elements of the ACA. We continue to evaluate the effect that the ACA and its possible repeal and replacement has on our business.

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 2025 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. Recently there has been heightened governmental scrutiny over pharmaceutical pricing practices in light of the rising cost of prescription drugs and biologics. Such scrutiny has resulted in several recent Congressional inquiries and proposed and enacted federal and state legislation designed to, among other things, bring more transparency to product pricing, review the relationship between pricing and manufacturer patient programs, and reform government program reimbursement methodologies for products. At the federal level, Congress and the Trump administration have each indicated that it will continue to seek new legislative and/or administrative measures to control drug costs. At the state level, legislatures have become increasingly aggressive in passing legislation and implementing regulations designed to control pharmaceutical and biological product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access and marketing cost disclosure and transparency measures, and, in some cases, designed to encourage importation from other countries and bulk purchasing.

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. 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 our product candidates 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. With respect to TRC253, Janssen has an option to reacquire the intellectual property rights to the program on pre-negotiated terms until a certain period of time following the completion of clinical proof of concept. If Janssen exercises this right, while we would be entitled to receive an up-front payment and would have the opportunity to receive future milestone and royalty payments from Janssen, we would have no further rights to develop, commercialize or realize value from TRC253. In addition, Janssen has an option to negotiate with us to reacquire rights to TRC694 following the completion of clinical proof of concept, which may or may not result in an out-license of the product candidate back to Janssen. If we are unable to retain existing product candidates and 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. Our clinical development strategy and ability to directly manage or oversee our on-going and planned 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, additional reporting requirements and oversight if we become subject to a corporate integrity agreement or similar agreement to resolve allegations of non-compliance with these laws, 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 we believe are customary for other companies in our field and stage of development. 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, 2017, we had federal and California net operating loss carryforwards, or NOLs, of approximately $83.1 million and $85.3 million, respectively, which expire in various years beginning in 2030, if not utilized. Under the newly enacted federal income tax law, federal NOLs generated in 2018 and in future years may be carried forward indefinitely, but the deductibility of such NOLs is limited. It is uncertain if and to what extent various states will conform to the newly enacted federal tax law. As of December 31, 2017, we had federal and California research and development and Orphan Drug tax credit carryforwards of

approximately $7.0 million and $1.6 million, respectively. The federal research and development and Orphan Drug tax credit carryforwards expire in various years beginning in 2031, if not utilized. The California research and development credit will carry forward indefinitely under current law. 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 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.

The recently passed comprehensive tax reform bill could adversely affect our business and financial condition.

On December 22, 2017, President Trump signed into law new legislation that significantly revises the Code. The newly enacted federal income tax law, among other things, contains significant changes to corporate taxation, including reduction of the corporate tax rate from a top marginal rate of 35% to a flat rate of 21%, limitation of the tax deduction for interest expense to 30% of adjusted earnings (except for certain small businesses), limitation of the deduction for NOLs to 80% of current year taxable income and elimination of NOL carrybacks, one time taxation of offshore earnings at reduced rates regardless of whether they are repatriated, elimination of U.S. tax on foreign earnings (subject to certain important exceptions), immediate deductions for certain new investments instead of deductions for depreciation expense over time, and modifying or repealing many business deductions and credits. Notwithstanding the reduction in the corporate income tax rate, the overall impact of the new federal tax law is uncertain and our business and financial condition could be adversely affected. In addition, it is uncertain if and to what extent various states will conform to the newly enacted federal tax law. The impact of this tax reform on holders of our common stock is also uncertain and could be adverse. We urge our stockholders to consult with their legal and tax advisors with respect to this legislation and the potential tax consequences of investing in or holding our common stock.

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

The market price of our common stock may be highly volatile, and our stockholders may not be able to resell their shares at a desired market price and could lose all or part of their investment.

Prior to our initial public offering which was completed in 2015, there was no public market for our common stock. We cannot assure you that an active, liquid trading market for our shares will develop or persist. Our stockholders may not be able to sell their shares quickly or at a recently reported market price if trading in our common stock is not active. 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, in particular any sales by significant stockholders or our affiliates; 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.

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.

As of December 31, 2017, our executive officers, directors, 5% or greater stockholders and their affiliates beneficially owned approximately 40% of our voting stock. 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.

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 Quarterly Report and our other 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 our initial public 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 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.

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 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.

Item 1B. Unresolved Staff Comments

Not applicable.

Item 2. Properties.

Our principal executive offices are located at 4350 La Jolla Village Drive, Suite 800, San Diego, California 92122, in a facility we lease encompassing 10,458 square feet of office space. Our lease expires in April 2022 with an option for an additional five-year term.

Item 3. Legal Proceedings.

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. From time to time, we may be involved in various claims and legal proceedings relating to claims arising out of our operations. Regardless of outcome, litigation can have an adverse impact on us because of defense and settlement costs, diversion of management resources and other factors.

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market Information

Our common stock is listed on The NASDAQ Global Market under the ticker symbol "TCON". The following table presents the high and low per share prices for our common stock during the periods indicated as reported on The NASDAQ Global Market.

	High	Low
2017		
First quarter	$ 6.25	$ 3.60
Second quarter	4.40	2.00
Third quarter	3.95	2.00
Fourth quarter	3.91	2.50

	High	Low
2016		
First quarter	$ 9.24	$ 5.88
Second quarter	7.90	4.26
Third quarter	7.00	4.00
Fourth quarter	7.30	4.15

Holders of Record

As of February 9, 2018, there were approximately 138 stockholders of record of our common stock. Certain shares are held in "street" name and accordingly, the number of beneficial owners of such shares is not known or included in the foregoing number.

Dividend Policy

We have never declared or paid any dividends on our common stock. We currently intend to retain all available funds and any future earnings, if any, to fund the development and expansion of our business and we do not anticipate paying any cash dividends in the foreseeable future. In addition, pursuant to our credit and security agreement with Silicon Valley Bank, we are prohibited from paying cash dividends without the prior consent of Silicon Valley Bank. 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.

Securities Authorized for Issuance under Equity Compensation Plans

Information about our equity compensation plans is incorporated herein by reference to Item 12 of Part III of this Annual Report.

Recent Sales of Unregistered Securities.

None.

Item 6. Selected Financial Data.

The following selected financial data has been derived from our audited consolidated financial statements and should be read together with "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes included elsewhere in this Annual Report. The selected financial data in this section are not intended to replace our consolidated financial statements and the related notes. Our historical results are not necessarily indicative of the 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,		
	2017	2016	2015
	(in thousands, except share and per share data)		
Statement of Operations Data:			
Collaboration revenue	$ 8,755	$ 3,449	$ 7,904
Operating expenses:			
Research and development	19,355	21,566	25,680
General and administrative	7,610	7,859	5,691
Total operating expenses	26,965	29,425	31,371
Loss from operations	(18,210)	(25,976)	(23,467)
Other income (expense)	(893)	(1,032)	(943)
Net loss	(19,103)	(27,008)	(24,410)
Accretion to redemption value of redeemable convertible preferred stock	-	-	(31)
Net loss attributable to common stockholders	$ (19,103)	$ (27,008)	$ (24,441)
Net loss per share attributable to common stockholders, basic and diluted(1)	$ (1.14)	$ (2.13)	$ (2.20)
Weighted-average shares outstanding, basic and diluted(1)	16,806,094	12,677,910	11,115,651

(1) See Note 1 to our consolidated financial statements included elsewhere in this Annual Report for an explanation of the methods used to calculate the net loss per share attributable to common stockholders, basic and diluted, and the number of shares used in the computation of these per share amounts.

	As of December 31,	
	2017	2016
	(in thousands)	
Balance Sheet Data:		
Cash and cash equivalents	$ 29,467	$ 35,710
Short-term investments	4,999	8,703
Working capital	24,259	35,405
Total assets	36,130	45,730
Long-term debt, less current portion	4,603	7,130
Accumulated deficit	(104,701)	(85,598)
Total stockholders' equity	16,987	28,336

Item 7. 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 consolidated financial statements and the related notes and other financial information included elsewhere in this Annual Report. Some of the information contained in this discussion and analysis or set forth elsewhere in this Annual Report, 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 Annual Report 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 within Part I of this Annual Report entitled "Forward-Looking Statements."

Overview

We are a biopharmaceutical company focused on the development and commercialization of novel targeted therapeutics for cancer and wet age-related macular degeneration, or wet AMD. 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 required for solid cancer growth and wet AMD. We are developing our lead product candidate, TRC105 (carotuximab), an endoglin antibody, 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. 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. TRC105 has been studied in ten completed Phase 2 clinical trials and three completed Phase 1 clinical trials, and is currently being dosed in one Phase 3 clinical trial, five Phase 2 clinical trials and three Phase 1 clinical trials. Our TRC105 oncology clinical development plan is broad and involves a tiered approach. We are initially focused on angiosarcoma which is a tumor that highly expresses endoglin, the target of TRC105, and therefore may be more responsive to treatment with TRC105. We have seen complete durable responses in this tumor type and are currently enrolling the international multicenter Phase 3 TAPPAS trial in angiosarcoma. We obtained Special Protocol Assessment (SPA) agreement from the U.S. Food and Drug Administration (FDA) on our clinical trial design for the Phase 3 trial in angiosarcoma and also incorporated scientific advice from the European Medicines Agency (EMA) regarding the adequacy of the trial design. We also received orphan drug designation from the FDA and the EMA for TRC105 for the treatment of soft tissue sarcoma, including angiosarcoma, in 2016.

In March 2014, Santen Pharmaceutical Co. Ltd. (Santen) licensed from us exclusive worldwide rights to develop and commercialize our endoglin antibodies for ophthalmology indications, and in July 2017 Santen initiated dosing in a Phase 2 clinical trial of DE-122 in wet AMD. In December 2017, Ambrx, Inc. (Ambrx) licensed from us exclusive rights to develop and commercialize our endoglin antibodies in China (including Hong Kong and Macau) and Taiwan.

Our other product candidates are TRC102, which is a small molecule that is in Phase 2 clinical development for the treatment of mesothelioma and glioblastoma, and two compounds that we licensed from Janssen Pharmaceutica N.V. (Janssen) in September 2016: TRC253, which is a small molecule for which we initiated a Phase 1/2 clinical trial for the treatment of metastatic castration-resistant prostate cancer in March 2017, and TRC694, a small molecule in pre-clinical development for the treatment of hematologic malignancies, including myeloma.

TRC102 is a small molecule in clinical development to reverse resistance to specific chemotherapeutics by inhibiting base-excision repair, or BER. In initial clinical trials of more than 100 patients, TRC102 has shown good tolerability and promising anti-tumor activity in combination with alkylating and antimetabolite chemotherapy in the treatment of lung cancer and glioblastoma. TRC102 began Phase 2 testing in mesothelioma in combination with the approved chemotherapeutic Alimta in 2015 and began Phase 2 testing in glioblastoma in combination with the approved chemotherapeutic Temodar in 2016. TRC102 is also being studied in three Phase 1 clinical trials: in combination with Alimta and cisplatin in mesothelioma patients, in combination with chemoradiation in lung cancer patients, and in combination with Temodar in ovarian, lung and colorectal cancer patients. All current TRC102 trials are sponsored and funded by the National Cancer Institute (NCI). We retain global rights to develop and commercialize TRC102 in all indications.

We have collaborated with the NCI, which selected TRC105 and TRC102 for federal funding of clinical development, as well as Case Western Cancer Center (Case Western), the University of Alabama – Birmingham, and Cedars-Sinai Medical Center. Under these collaborations, NCI sponsored or is sponsoring ten completed or ongoing clinical trials of TRC105 and TRC102, Case Western sponsored two clinical trials of TRC102, the University of Alabama – Birmingham is sponsoring one clinical trial of TRC105 and Cedars-Sinai Medical Center is sponsoring one clinical trial of TRC105. All TRC105 NCI sponsored trials have been completed. If merited by Phase 2 data, we expect to fund additional 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 table summarizes key information regarding ongoing development of our product candidates:

	Phase	Data Expected
TRC105		
Angiosarcoma	Phase 3	Interim analysis second half 2018
Renal Cell Carcinoma	Randomized Phase 2	Mid 2018
Gestational Trophoblastic Neoplasia (GTN)	Phase 2	2018
Hepatocellular Carcinoma	Phase 1/2	2019
Lung Cancer (with Opdivo)	Phase 1	2018
Breast Cancer	Phase 1/2	2018
Lung Cancer	Phase 1	2018
Prostate Cancer	Phase 2	2019
Wet AMD (Santen) (DE-122)	Randomized Phase 2	2019
TRC102		
Mesothelioma	Phase 2	2019
Glioblastoma	Phase 2	2018
Solid tumors	Phase 1	2019
Solid tumors and Lymphomas	Phase 1/2	2018
Lung Cancer	Phase 1	2019
TRC253		
Prostate Cancer	Phase 1/2	2018

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. To date, we have not generated any revenue from product sales and instead, have funded our operations from the sales of capital stock, payments received in connection with our collaboration agreements and commercial bank debt under our credit facilities with Silicon Valley Bank (SVB). At December 31, 2017, we had cash, cash equivalents and short-term investments totaling $34.5 million.

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.

We have incurred losses from operations in each year since our inception. Our net losses were $19.1 million, $27.0 million, and $24.4 million for the years ended December 31, 2017, 2016, and 2015, respectively. At December 31, 2017, we had an accumulated deficit of $104.7 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:

- manufacture preclinical study and clinical trial materials and prepare for potential commercial manufacture of TRC105;
- continue to conduct clinical trials of our product candidates;
- continue our research and development efforts;
- maintain, expand and protect our intellectual property portfolio; and
- seek regulatory approvals for our product candidates that successfully complete clinical trials.

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. 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.

Collaboration and License Agreements

Ambrx, Inc.

In December 2017, we entered into a license agreement with Ambrx for the development and commercialization of TRC105 in China. The license grants Ambrx the exclusive rights to use, develop, manufacture and commercialize TRC105 products in all indications (excluding ophthalmology which are held by Santen) in China (including Hong Kong and Macau) and Taiwan (the Ambrx Territory). Ambrx also has the right to grant sublicenses to affiliates and third party collaborators, provided such sublicenses are consistent with the terms of our agreement and excluding the rights licensed to us under the our license with Lonza.

In consideration of the rights granted to Ambrx under the agreement, we received a one-time upfront fee of $3.0 million. In addition, we are eligible to receive up to a total of $140.5 million in milestone payments upon the achievement of certain milestones, of which $10.5 million relates to development, the submission of certain regulatory filings and receipt of certain regulatory approvals and $130.0 million relates to the achievement of specified levels of product sales. If TRC105 products are successfully commercialized in the Ambrx Territory, Ambrx 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. 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. As of December 31, 2017, none of the milestones had been achieved.

Janssen Pharmaceutica N.V.

In September 2016, we entered into a strategic licensing collaboration with Janssen for two novel oncology assets from Janssen's early oncology development portfolio. The agreement grants us the rights to develop TRC253 (formerly JNJ-63576253), a novel small molecule high affinity competitive inhibitor of wild type androgen receptor (AR Mutant Program) and multiple AR mutant receptors which display drug resistance to approved treatments, which is intended for the treatment of men with prostate cancer, and TRC694 (formerly JNJ-6420694), a novel, potent, orally bioavailable inhibitor of NF-kB inducing kinase (the NIK Program and, together with the AR Mutant Program, the Programs), which is intended for the treatment of patients with hematologic malignancies, including myeloma.

Janssen maintains an option, which is exercisable until 90 days after we demonstrate clinical proof of concept with respect to the AR Mutant Program, to regain the rights to the licensed intellectual property and to obtain an exclusive license to commercialize the compounds and certain other specified intellectual property developed under the AR Mutant Program. If Janssen exercises the option, Janssen will be obligated to pay us (i) a one-time option exercise fee of $45.0 million; (ii) regulatory and commercial based milestone payments totaling up to $137.5 million upon achievement of specified events; and (iii) royalties in the low single digits on annual net sales of AR Mutant Program products. If Janssen does not exercise the option, we would then have the right to retain worldwide development and commercialization rights to the AR Mutant Program, in which case, we would be obligated to pay to Janssen (x) development and regulatory based milestone payments totaling up to $45.0 million upon achievement of specified events, and (y) royalties in the low single digits based on annual net sales of AR Mutant Program products, subject to certain specified reductions.

With respect to the NIK Program, Janssen maintains a right, which is exercisable within 90 days following the date on which we demonstrate clinical proof of concept with respect to the NIK Program, to negotiate for a period of six months for a reversion of the related rights in the licensed intellectual property and to obtain an exclusive license to commercialize the compounds and certain other specified intellectual property developed under the NIK Program. If Janssen does not exercise its right of first negotiation, or, if after exercise of such right, Janssen and we are unable to reach an agreement on the terms of a reversion and exclusive license, and, in either case, we continue the development of the NIK Program, then we would be obligated to pay Janssen (i) development and regulatory based milestone payments totaling up to $60.0 million upon achievement of specified events, and (ii) royalties in the low single digits based on annual net sales of NIK Program products, subject to certain specified reductions.

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. As of December 31, 2017, we had received $10.0 million in milestones related to development activities. 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 recognized revenue through December 31, 2017 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 recognized 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, the timing of any additional collaboration agreements and recognition of associated upfront and milestone payments, such as from our license with Ambrx, whether and when Janssen reacquires rights to the AR Mutant Program and/or NIK Program and the extent to which any of our products are approved and successfully commercialized by us or our partners. If we or our partners 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 incurred under clinical trial agreements with investigative sites;
- costs to acquire, develop and manufacture preclinical study and clinical trial materials;
- 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;
- 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,		
	2017	2016	2015
	(in thousands)		
Third-party research and development expenses:			
TRC105	$ 10,684	$ 14,240	$ 20,031
TRC253	1,494	266	—
TRC102	87	523	122
TRC694	355	144	—
TRC205	16	71	277
Total third-party research and development expenses	12,636	15,244	20,430
Unallocated expenses	6,719	6,322	5,250
Total research and development expenses	$ 19,355	$ 21,566	$ 25,680

Unallocated expenses consist primarily of our internal personnel related and facility costs.

We expect our current level of research and development expenses to continue to increase for the foreseeable future as we continue development of TRC105, including our Phase 3 clinical trial in angiosarcoma, continue development activities for our licensed compounds, TRC253 and TRC694, including our Phase 1/2 clinical trial of TRC253 in castration-resistant prostate cancer, and expand our manufacturing activities required for regulatory approval for TRC105.

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 and Ambrx;
- the extent to which costs for comparator drugs are borne by third parties;
- 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 participation in the trials and 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 legal services, including those associated with obtaining and maintaining patents, insurance, occupancy costs, accounting services, and the cost of various consultants.

We anticipate that our general and administrative expenses will remain relatively constant in the near term.

Other Income (Expense)

Other income (expense) primarily consists of interest related to our loan agreements with SVB, offset in part by interest income from our short-term investments and cash equivalents.

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 consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States, or GAAP. The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the financial statements, as well as the reported 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 consolidated financial statements appearing elsewhere in this Annual Report, we believe that the following accounting policies related to revenue recognition, expense accruals and stock-based compensation 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 agreements, 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.

Clinical Trial Expense Accruals

As part of the process of preparing our financial statements, we are required to estimate expenses resulting from our obligations under contracts with vendors, contract research organizations, or CROs, and consultants and under clinical site agreements in connection with conducting clinical trials. The financial terms of these contracts vary and may result in payment flows that do not match the periods over which materials or services are provided under such contracts.

Our objective is to reflect the appropriate trial expenses in our financial statements by recording those expenses in the period in which services are performed and efforts are expended. We account for these expenses according to the progress of the trial as measured by patient progression and the timing of various aspects of the trial. We determine accrual estimates through financial models taking into account discussion with applicable personnel and outside service providers as to the progress or state of consummation of trials. During the course of a clinical trial, we adjust the clinical expense recognition if actual results differ from our estimates. We make estimates of accrued expenses as of each balance sheet date based on the facts and circumstances known at that time. Our clinical accruals are dependent upon accurate reporting by CROs or other third-party vendors. Although we do not expect our estimates to differ materially from amounts actually incurred, our understanding of the status and timing of services performed relative to the actual status and timing of services performed may vary and may result in reporting amounts that are too high or too low for any particular period. For the three years in the period ended December 31, 2017, there were no material adjustments to our prior period estimates of accrued expenses for clinical trials.

Stock-Based Compensation

Stock-based compensation expense represents the grant date fair value of employee stock option and award 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 consolidated financial statements included elsewhere in this Annual Report 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 for all periods presented.

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

	Years Ended December 31,		
	2017	2016	2015
	(in thousands)		
Research and development	$ 1,482	$ 1,090	$ 1,038
General and administrative	1,712	1,993	1,050
Total stock-based compensation expense	$ 3,194	$ 3,083	$ 2,088

As of December 31, 2017, the unrecognized stock-based compensation expense related to outstanding stock options and awards was $4.8 million and is expected to be recognized as expense over a weighted-average period of approximately 2.1 years.

Determination of the fair value of common stock

Prior to our initial public offering, the fair value of the common stock underlying our stock-based awards was determined on each grant date by our board of directors, with input from management. All options to purchase shares of our common stock were 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, determined in good faith and based on the information known to us on the date of grant.

Following the closing of our initial public offering, our board of directors determines 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.

Other Company Information

Net Operating Loss and Research and Development Tax Credit Carryforwards

At December 31, 2017, we had federal and California net operating loss, or NOL, carryforwards, of approximately $83.1 million and $85.3 million, respectively. The federal and California NOL carryforwards will begin expiring in 2030, unless previously utilized. At December 31, 2017, we had federal and California research and development and Orphan Drug credit carryforwards of approximately $7.0 million and $1.6 million, respectively. The federal research and development and Orphan Drug credit carryforwards will begin expiring in 2031, unless previously utilized. The California research and development credit carryforwards do not expire.

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, 2015 and as a result of the analysis, an ownership change was determined to have occurred at the time of our initial public offering. Future ownership changes may further limit our ability to utilize our remaining NOL and research and development tax credit carryforwards. As of December 31, 2017, 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 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, (i) 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 (ii) 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 earlier of (1) the last day of the fiscal year (a) following the fifth anniversary of the completion of our initial public offering, (b) in which we have total annual gross revenue of at least $1.0 billion, or (c) in which we are deemed to be a large accelerated filer, which means the market value of our common stock that is held by non-affiliates exceeds $700.0 million as of the prior June 30th, and (2) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

Recent Accounting Pronouncements

In May 2014, the Financial Accounting Standard Board (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, 2017. We plan on adopting ASU 2014-09 using the modified retrospective approach and do not expect the adoption to have a material impact on our financial position and results of operations.

In February 2016, the FASB issued ASU 2016-02, *Leases*, which outlines a comprehensive lease accounting model and supersedes the current lease guidance. The new accounting standard requires lessees to recognize lease liabilities and corresponding right-of-use assets for all leases with lease terms of greater than twelve months. It also changes the definition of a lease and expands the disclosure requirements of lease arrangements. The new accounting standard must be adopted using the modified retrospective approach and is effective for public entities for annual reporting periods beginning after December 15, 2018 with early adoption permitted. We do not expect the adoption of ASU 2016-02 to have a material impact on our financial statements and related disclosures.

Recently Adopted Accounting Standards

In March 2016, the FASB issued ASU 2016-09, *Improvements to Employee Share-Based Payment Accounting*, which amends ASC Topic 718, Compensation – Stock Compensation. ASU 2016-09 includes an update which simplifies the accounting for employee share-based payment transactions, including the accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as classification in the statement of cash flows. ASU 2016-09 is effective for public entities for annual reporting periods beginning after December 15, 2016, and interim periods within that reporting period. We adopted ASU 2016-09 in the first quarter of 2017 and made an accounting policy change to record forfeitures as they occur, which resulted in no change to our financial statements and related disclosures.

Results of Operations

Comparison of the Years Ended December 31, 2017 and 2016

The following table summarizes our results of operations for the years ended December 31, 2017 and 2016:

	Years Ended December 31,		
	2017	2016	Change
	(in thousands)		
Collaboration revenue	$ 8,755	$ 3,449	$ 5,306
Research and development expenses	19,355	21,566	(2,211)
General and administrative expenses	7,610	7,859	(249)
Other income (expense)	(893)	(1,032)	139

Collaboration revenue. Collaboration revenue was $8.8 million and $3.4 million for the years ended December 31, 2017 and 2016, respectively. The increase in revenue was due to the achievement of a $7.0 million development milestone by Santen in the third quarter of 2017 for which there was no comparable milestone in 2016, partially offset by fewer months of recognition of the license in 2017 due to the end of the term over which we provided regulatory and technical support to Santen.

Research and development expenses. Research and development expenses were $19.4 million and $21.6 million for the years ended December 31, 2017 and 2016, respectively. The decrease of $2.2 million was due to a decrease in manufacturing activities and nonclinical activities, partially offset by increased clinical study expenses related to the continued development of TRC105, as well as increased compensation related expenses.

General and administrative expenses. General and administrative expenses were $7.6 million and $7.9 million for the years ended December 31, 2017 and 2016, respectively.

Other income (expense). Other income (expense) was $(0.9) million and $(1.0) million for the years ended December 31, 2017 and 2016, respectively.

Comparison of the Years Ended December 31, 2016 and 2015

The following table summarizes our results of operations for the years ended December 31, 2016 and 2015:

	Years Ended December 31,		
	2016	2015	Change
	(in thousands)		
Collaboration revenue	$ 3,449	$ 7,904	$ (4,455)
Research and development expenses	21,566	25,680	(4,114)
General and administrative expenses	7,859	5,691	2,168
Other income (expense)	(1,032)	(943)	(89)

Collaboration revenue. Collaboration revenue was $3.4 million and $7.9 million for the years ended December 31, 2016 and 2015, respectively. The decrease in revenue was due to the achievement of a $3.0 million development milestone by Santen in June 2015 for which there was no comparable milestone in 2016, and the increase in 2016 in the expected term over which we expect to provide technical and regulatory support to Santen.

Research and development expenses. Research and development expenses were $21.6 million and $25.7 million for the years ended December 31, 2016 and 2015, respectively. The decrease of $4.1 million was due to a decrease in manufacturing activities, partially offset by increased clinical study expenses related to the continued development of TRC105, as well as increased compensation related expenses due to increased headcount and stock-based compensation expenses, and expenses related to our recently acquired assets, TRC253 and TRC694.

General and administrative expenses. General and administrative expenses were $7.9 million and $5.7 million for the years ended December 31, 2016 and 2015, respectively. The increase of $2.2 million was due primarily to increased compensation related expenses due to increased headcount and stock-based compensation expenses.

Other income (expense). Other income (expense) was $(1.0) million and $(0.9) million for the years ended December 31, 2016 and 2015, respectively.

Liquidity and Capital Resources

We have incurred losses and negative cash flows from operations since our inception. As of December 31, 2017, we had an accumulated deficit of $104.7 million, and we expect to continue to incur net losses for the foreseeable future. We expect that our research and development expenses will continue to increase and, as a result, we will need additional capital to fund our operations, which we may seek to obtain through one or more equity offerings, debt financings, government or other third-party funding, and licensing or collaboration arrangements.

On February 4, 2015, we completed the initial public offering and a concurrent private placement of our common stock, which resulted in net proceeds to us of approximately $35.0 million. In September 2016, we sold shares of our common stock in a private placement for net proceeds to us of approximately $5.0 million and in November 2016, we completed an underwritten public offering which resulted in net proceeds to us of approximately $16.1 million. In March 2017, we sold shares of our common stock to Aspire Capital Fund, LLC (Aspire) for net proceeds to us of approximately $1.0 million, and throughout 2017, we sold shares through our ATM facility with Stifel, Nicolaus & Company, Incorporated (Stifel) for net proceeds of approximately $3.4 million. We believe that our existing cash, cash equivalents and short-term investments will be sufficient to meet our anticipated cash requirements into the third quarter of 2018. Cash in excess of immediate requirements is invested in accordance with our investment policy, primarily with a view to capital preservation.

Common Stock Purchase Agreement with Aspire Capital Fund, LLC

In March 2017, we entered into a common stock purchase agreement (the Purchase Agreement) with Aspire Capital which provides that, upon the terms and subject to the conditions and limitations of the Purchase Agreement, Aspire Capital is committed to purchase up to an aggregate of $21.0 million of shares of our common stock. Upon execution of the Purchase Agreement, we sold to Aspire Capital 222,222 shares of common stock at $4.50 per share for proceeds of $1.0 million and Aspire Capital is committed to purchase up to $20.0 million of additional shares of our common stock at our request from time to time during a 30 month period that began on May 1, 2017 and at prices based on the market price of our common stock at the time of each sale, subject to certain conditions. In consideration for entering into the Purchase Agreement and concurrently with the execution of the Purchase Agreement, we issued to Aspire Capital 195,726 shares of our common stock. As of December 31, 2017, we had issued 417,948 shares of common stock to Aspire Capital under the Purchase Agreement for net proceeds of approximately $0.9 million after offering expenses.

Credit Facility with SVB

In January 2017, we entered into a second amendment to our Amended and Restated Loan and Security Agreement with SVB (the 2017 Amended SVB Loan) under which we borrowed $8.0 million, all of which was used to refinance previously outstanding amounts under the loan and security agreement. In connection with the 2017 Amended SVB Loan, we issued warrants to purchase up to 46,692 shares of common stock at an exercise price of $5.14 per share. The warrants are fully exercisable and expire on January 25, 2024.

The 2017 Amended SVB Loan provides for interest to be paid at a rate of 8.55% per annum, with interest-only payments due monthly through December 31, 2017. Thereafter, in addition to interest accrued during such period, the monthly payments include an amount equal to the outstanding principal at December 31, 2017 divided by 30 months. At maturity (or earlier prepayment), we are also required to make a final payment equal to 4.0% of the original principal amounts borrowed. The 2017 Amended SVB Loan provides for prepayment fees of 2.0% of the amount prepaid if the prepayment occurs after January 26, 2018 but prior to January 25, 2019 and 1.0% of the amount prepaid if the prepayment occurs thereafter.

The 2017 Amended SVB Loan is collateralized by substantially all of our assets, other than our intellectual property, and 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 required to immediately repay all obligations under the 2017 Amended SVB Loan.

ATM Facility with Stifel, Nicolaus & Company, Incorporated

In February 2016, we entered into a Sales Agreement with Stifel pursuant to which we may sell from time to time, at our option, up to an aggregate of $25.0 million of shares of our common stock through Stifel, as sales agent. Sales of our common stock made pursuant to the Sales Agreement, if any, will be made on the Nasdaq Global Market under our effective registration statement on Form S-3, by means of ordinary brokers' transactions at market prices. Additionally, under the terms of the Sales Agreement, we may also sell shares of our common stock through Stifel, on the Nasdaq Global Market or otherwise, at negotiated prices or at prices related to the prevailing market price. Stifel will use its commercially reasonable efforts to sell our common stock from time to time, based upon our instructions (including any price, time or size limits or other customary parameters or conditions we may impose). We are obligated to pay Stifel an aggregate sales agent commission equal to 2.5% of the gross proceeds of the sales price for common stock sold under the Sales Agreement. As of December 31, 2017, approximately 1,037,000 shares of our common stock had been sold under the Sales Agreement and approximately $21.5 million of common stock remained available to be sold, subject to limitations on the amount of securities we may sell under our effective registration statement on Form S-3 within any 12 month period.

Cash Flows

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

	Years Ended December 31,		
	2017	2016	2015
	(in thousands)		
Net cash provided by (used in):			
Operating activities	$ (13,243)	$ (27,150)	$ (19,163)
Investing activities	3,674	2,073	(10,917)
Financing activities	3,326	19,414	36,453
(Decrease) increase in cash and cash equivalents	$ (6,243)	$ (5,663)	$ 6,373

Operating activities. Net cash used in operating activities was $13.2 million for the year ended December 31, 2017 and was primarily due to our net loss, adjusted for noncash items, offset by changes in our working capital. Net cash used in operating activities was $27.2 million for the year ended December 31, 2016 and was primarily due to our net loss, adjusted for noncash items, offset by changes in our working capital. Net cash used in operating activities was $19.2 million for the year ended December 31, 2015, and was primarily due to our net loss, adjusted for noncash items, offset by changes in our working capital.

Investing activities. Net cash provided by investing activities was $3.7 million for the year ended December 31, 2017 and was related to proceeds from the maturities of short-term investments, offset by the purchases of those investments. Net cash provided by investing activities was $2.1 million for the year ended December 31, 2016 and was related to proceeds from the maturities of short-term investments, offset by the purchases of those investments. Net cash used in investing activities was $10.9 million for the year

ended December 31, 2015 and was related to purchases of short-term investments, offset by maturities of those investments, and purchases of property and equipment.

Financing activities. Net cash provided by financing activities was $3.3 million for the year ended December 31, 2017 and resulted from net proceeds received totaling $4.1 million from sales of shares of common stock to Aspire Capital and through our ATM facility, partially offset by repayments of our loan under our credit facility with SVB. Net cash provided by financing activities was $19.4 million for the year ended December 31, 2016 and resulted from net proceeds received totaling $16.1 million from our follow-on public offering, net proceeds of $5.0 million received from a private placement of our common stock in connection with our license agreements with Janssen, partially offset by repayments of our loan under our credit facility with SVB. Net cash provided by financing activities was $36.5 million for the year ended December 31, 2015 and resulted primarily from net proceeds received totaling $36.2 million from our initial public offering and concurrent private placement.

Funding Requirements

At December 31, 2017, we had cash, cash equivalents and short-term investments totaling $34.5 million. We believe that our existing cash, cash equivalents and short-term investments will be sufficient to meet our anticipated cash requirements through mid-2018. We will need additional funding to complete the development and commercialization of our product candidates, specifically our lead product candidate, TRC105, including to complete our ongoing Phase 3 trial in angiosarcoma. In addition, we may evaluate in-licensing and acquisition opportunities to gain access to new product candidates that fit with our strategy. Any such transaction will likely increase our future funding requirements. We may not be successful in raising sufficient additional capital to continue to operate our business. These uncertainties raise substantial doubt about our ability to continue as a going concern for a period of one year following the date that the accompanying financial statements were issued.

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

- our ability to initiate, and the progress and results of, our planned clinical trials;
- the ability and willingness of our collaboration partners and licensees to continue clinical development of our product candidates;
- our ability to enter into and maintain our collaborations, including our collaborations with Santen and Janssen;
- our ability to achieve, and our obligations to make, milestone payments under our collaboration and license agreements;
- the costs and timing of procuring supplies of our product candidates for clinical trials and regulatory submissions;
- the scope, progress, results and costs of preclinical development, and clinical trials of our other product candidates;
- whether and when Janssen reacquires the rights to the AR Mutant Program and/or the NIK Program;
- 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, and licensing arrangements. There can be no assurance that additional funds will be available when needed from any source or, if available, will be available on terms that are acceptable to us. Even if we raise additional capital, we may also be required to modify, delay or abandon some of our plans which could have a material adverse effect on our business, operating results and financial condition and our ability to achieve our intended business objectives. Any of these actions could materially harm our business, results of operations and future prospects.

Contractual Obligations and Commitments

The following table summarizes our contractual obligations at December 31, 2017:

		Payments Due by Period			
	Total	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)	$ 9,216	$ 3,766	$ 5,450	$ —	$ —
Operating lease obligations (2)	1,887	405	865	617	—
Purchase obligations (3)	10,219	10,219	—	—	—
Total	$ 21,322	$ 14,390	$ 6,315	$ 617	$ -

(1) We will make principal and interest payments to SVB in accordance with the required payment schedule.

(2) Our operating lease obligations relate to our corporate headquarters in San Diego, California. We lease 10,458 square feet of office space under an operating lease that expires in April 2022.

(3) The purchase obligations are primarily comprised of our non-cancellable purchase commitments under our 2008 master services agreement with Lonza Sales AG (Lonza) and our manufacturing agreement with Lonza Biologics Tuas Pte Ltd (Lonza Biologics), and amounts include estimates based on forecasts which may differ from actual amounts we pay.

Under our long-term manufacturing agreement with Lonza Biologics executed in February 2017, we are required to purchase certain batches of TRC105 prior to regulatory approval with a total estimated cost of approximately $15.0 million. Following regulatory approval, we will be required to purchase a specified minimum number of batches annually with a total annual estimated cost of approximately $22.0 million. If we cancel any purchase orders, we may be obligated to pay certain cancellation fees. In addition, we may be obligated to pay a milestone fee to Lonza Biologics related to the approval or qualifying response to the first marketing application for TRC105 by the U.S Food and Drug Administration (FDA) or European Medicines Agency (EMA).

The manufacturing agreement has an initial term beginning on the effective date and ending on the seventh anniversary of the date of first regulatory approval of TRC105 by the FDA or EMA. The Manufacturing Agreement may be renewed for an additional three years upon the written agreement of both parties no later than the fifth anniversary of the date of first approval of TRC105 by the FDA or EMA.

We or Lonza Biologics may terminate the manufacturing agreement due to a material breach of the agreement by the other party, subject to prior written notice and a cure period, due to the insolvency or bankruptcy of the other party, or due to a force majeure event that prevents performance under the agreement for at least six months. We also have the right to terminate the manufacturing agreement, subject to sixty days' written notice, if we discontinue the TRC105 program, whether due to a notice of non-approval or withdrawal of marketing approval by a regulatory agency or otherwise. In the event we terminate the manufacturing agreement due to discontinuation of the TRC105 program or a termination by Lonza Biologics due to our material breach or insolvency or bankruptcy, we would be obligated to pay to Lonza Biologics certain batch cancellation and/or early termination fees.

In addition, 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, 2017, 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 ($1.4 million of which has been 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 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 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 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 $0.7 million relates to the initiation of certain development activities ($0.2 million of which has been paid) 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.
- Under our license agreement with Janssen for TRC253 and TRC694, we may be required to pay up to an aggregate of $105.0 million in milestone payments, of which $45.0 million relates to the initiation of certain development activities and $60.0 million relates to the submission of certain regulatory filings and receipt of certain regulatory approvals. If TRC253 or TRC694 are successfully commercialized, we will be required to pay Janssen a low single-digit royalty on net sales, subject to reductions in certain circumstances.

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.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

Interest Rate Risk

At December 31, 2017, our cash and cash equivalents consist of cash and money market funds. Our short-term investments consist of U.S. Treasury securities with contractual maturity dates of less than three months. 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 expenses for patients enrolled in our clinical studies and for the manufacture of clinical trial materials outside the United States based on contractual obligations denominated in currencies other than the U.S. dollar, primarily 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 our 2017 fiscal year, a movement of 1% 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.

Item 8. Financial Statement and Other Supplementary Information.

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of
TRACON Pharmaceuticals, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of TRACON Pharmaceuticals, Inc. (the Company) as of December 31, 2017 and 2016, the related consolidated statements of operations, redeemable convertible preferred stock and stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2017, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2017 and 2016, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2017, in conformity with U.S. generally accepted accounting principles.

The Company’s Ability to Continue as a Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company has suffered recurring losses from operations and has stated that substantial doubt exists about the Company’s ability to continue as a going concern. Management's evaluation of the events and conditions and management’s plans regarding these matters are also described in Note 1. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting 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.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ Ernst & Young LLP

We have served as the Company’s auditor since 2011.
San Diego, California
February 28, 2018

TRACON Pharmaceuticals, Inc.

Consolidated Balance Sheets

(in thousands, except share and per share data)

	December 31, 2017	December 31, 2016
Assets		
Current assets:		
Cash and cash equivalents	$ 29,467	$ 35,710
Short-term investments	4,999	8,703
Prepaid and other assets	1,591	1,235
Total current assets	36,057	45,648
Property and equipment, net	73	82
Total assets	$ 36,130	$ 45,730
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable and accrued expenses	$ 6,800	$ 6,213
Accrued compensation and related expenses	1,494	1,588
Current portion of deferred revenue	667	1,259
Long-term debt, current portion	2,837	333
Final payment due bank	—	850
Total current liabilities	11,798	10,243
Deferred revenue	2,333	—
Other long-term liabilities	409	21
Long-term debt, less current portion	4,603	7,130
Commitments and contingencies (Note 5)		
Stockholders' equity:		
Preferred stock, $0.001 par value, authorized shares — 10,000,000 at December 31, 2017 and December 31, 2016; issued and outstanding shares—none	—	—
Common stock, $0.001 par value; authorized shares — 200,000,000 at December 31, 2017 and December 31, 2016; issued and outstanding shares — 17,711,928 and 16,084,721 at December 31, 2017 and December 31, 2016, respectively	18	16
Additional paid-in capital	121,670	113,918
Accumulated deficit	(104,701)	(85,598)
Total stockholders' equity	16,987	28,336
Total liabilities and stockholders' equity	$ 36,130	$ 45,730

See accompanying notes.

TRACON Pharmaceuticals, Inc.

Consolidated Statements of Operations

(in thousands, except share and per share data)

	Years Ended December 31,		
	2017	2016	2015
Collaboration revenue	$ 8,755	$ 3,449	$ 7,904
Operating expenses:			
Research and development	19,355	21,566	25,680
General and administrative	7,610	7,859	5,691
Total operating expenses	26,965	29,425	31,371
Loss from operations	(18,210)	(25,976)	(23,467)
Other income (expense):			
Interest expense, net	(886)	(1,119)	(923)
Other income (expense), net	(7)	87	(20)
Total other income (expense)	(893)	(1,032)	(943)
Net loss	(19,103)	(27,008)	(24,410)
Accretion to redemption value of redeemable convertible preferred stock	—	—	(31)
Net loss attributable to common stockholders	$ (19,103)	$ (27,008)	$ (24,441)
Net loss per share attributable to common stockholders, basic and diluted	$ (1.14)	$ (2.13)	$ (2.20)
Weighted-average shares outstanding, basic and diluted	16,806,094	12,677,910	11,115,651

See accompanying notes.

TRACON Pharmaceuticals, Inc.

Consolidated Statements of Redeemable Convertible Preferred Stock and Stockholders' Equity (Deficit)

(in thousands, except share and per share data)

	Redeemable Convertible Preferred Stock		Common Stock		Additional Paid-in Capital	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount			
Balance at December 31, 2014	24,650,273	$ 49,880	1,633,854	$ 2	$ 2,004	$ (34,180)	$ (32,174)
Initial public offering and private placement of common stock for cash of $10 per share, net of offering costs	—	—	4,100,000	4	34,950	—	34,954
Accretion to redemption value of redeemable convertible preferred stock	—	31	—	—	(31)	—	(31)
Conversion of redeemable convertible preferred stock into common stock at initial public offering	(24,650,273)	(49,911)	6,369,567	6	49,905	—	49,911
Reclassification of redeemable convertible preferred stock warrant	—	—	—	—	311	—	311
Issuance of common stock under equity plans	—	—	72,521	—	179	—	179
Stock-based compensation expense	—	—	—	—	2,088	—	2,088
Vested shares related to repurchase liability	—	—	—	—	12	—	12
Issuance of common stock warrants in connection with debt financing	—	—	—	—	138	—	138
Net loss	—	—	—	—	—	(24,410)	(24,410)
Balance at December 31, 2015	—	—	12,175,942	12	89,556	(58,590)	30,978
Issuance of common stock under equity plans	—	—	37,672	—	178	—	178
Stock-based compensation expense	—	—	—	—	3,083	—	3,083
Vested shares related to repurchase liability	—	—	—	—	13	—	13
Issuance of common stock in a public offering, net of offering costs	—	—	3,018,750	3	16,110	—	16,113
Other issuances of common stock, net	—	—	840,022	1	4,955	—	4,956
Issuance of common stock in exchange for services	—	—	12,335	—	23	—	23
Net loss	—	—	—	—	—	(27,008)	(27,008)
Balance at December 31, 2016	—	—	16,084,721	16	113,918	(85,598)	28,336
Issuance of common stock under equity plans	—	—	172,120	—	35	—	35
Stock-based compensation expense	—	—	—	—	3,194	—	3,194
Vested shares related to repurchase liability	—	—	—	—	14	—	14
Issuances of common stock, net of offering costs	—	—	1,455,087	2	4,306	—	4,308
Issuance of common stock in exchange for services	—	—	—	—	29	—	29
Issuance of common stock warrants in connection with debt financing	—	—	—	—	174	—	174
Net loss	—	—	—	—	—	(19,103)	(19,103)
Balance at December 31, 2017	—	$ —	17,711,928	$ 18	$ 121,670	$ (104,701)	$ 16,987

See accompanying notes.

TRACON Pharmaceuticals, Inc.

Consolidated Statements of Cash Flows

(in thousands)

	Years Ended December 31,		
	2017	2016	2015
Cash flows from operating activities			
Net loss	$ (19,103)	$ (27,008)	$ (24,410)
Adjustments to reconcile net loss to net cash used in operating activities:			
Stock-based compensation	3,194	3,083	2,088
Common stock issued for services	29	23	—
Depreciation and amortization	48	94	51
Amortization of debt discount	117	100	97
Amortization of premium/discount on short-term investments	(9)	3	8
Noncash interest	354	522	417
Change in fair value of preferred stock warrant liability	—	—	65
Deferred rent	60	(53)	(4)
Deferred revenue	1,741	(2,094)	(3,550)
Changes in assets and liabilities:			
Prepaid expenses and other assets	(356)	(42)	(424)
Accounts payable and accrued expenses	776	(2,203)	6,144
Accrued compensation and related expenses	(94)	425	355
Net cash used in operating activities	(13,243)	(27,150)	(19,163)
Cash flows from investing activities			
Purchase of property and equipment	(39)	(3)	(127)
Purchases of available-for-sale short-term investments	(13,992)	(17,506)	(12,790)
Proceeds from the maturity of available-for-sale short-term investments	17,705	19,582	2,000
Net cash provided by (used in) investing activities	3,674	2,073	(10,917)
Cash flows from financing activities			
Proceeds from long-term debt	8,000	—	10,000
Repayment of long-term debt	(8,850)	(2,000)	(9,930)
Proceeds from sale of common stock, net of offering costs paid in the current period	4,141	21,236	36,204
Proceeds from issuance of common stock under equity plans	172	178	179
Payment of tax withholdings related to net share settlements of vested restricted stock awards	(137)	—	—
Net cash provided by financing activities	3,326	19,414	36,453
(Decrease) increase in cash and cash equivalents	(6,243)	(5,663)	6,373
Cash and cash equivalents at beginning of period	35,710	41,373	35,000
Cash and cash equivalents at end of period	$ 29,467	$ 35,710	$ 41,373
Supplemental disclosure of cash flow information			
Interest paid	$ 664	$ 622	$ 428
Supplemental schedule of noncash investing and financing activities			
Issuance of common stock warrants in connection with long-term debt	$ 174	$ —	$ 138
Issuance of common stock in connection with common stock purchase agreement	$ 793	$ —	$ —

See accompanying notes.

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, wet age-related macular degeneration and fibrotic diseases. The Company's lead product candidate is an antibody that binds to the endoglin receptor, which is essential to angiogenesis (the process of new blood vessel formation).

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiary, TRACON Pharma Limited, which was formed in September 2015 and is currently inactive. All significant intercompany accounts and transactions have been eliminated.

Basis of Presentation

As of December 31, 2017, the Company has devoted substantially all of its efforts to product development, raising capital, and building infrastructure and has not realized revenues from its planned principal operations. The Company has incurred operating losses since inception. As of December 31, 2017, the Company had an accumulated deficit of $104.7 million. The Company anticipates that it will continue to incur net losses into the foreseeable future as it continues the development and commercialization of its product candidates and works to develop additional product candidates through research and development programs. At December 31, 2017, the Company had cash, cash equivalents and short-term investments of $34.5 million. Based on the Company's current business plan, management believes that existing cash, cash equivalents and short-term investments will be sufficient to fund the Company's obligations into the third quarter of 2018. The Company's ability to execute its operating plan beyond mid-2018 depends on its ability to obtain additional funding through equity offerings, debt financings or potential licensing and collaboration arrangements. The accompanying consolidated financial statements have been prepared assuming the Company will continue as a going concern, which contemplates the realization of assets and settlement of liabilities in the normal course of business. However, the Company's current working capital, anticipated operating expenses and net losses and the uncertainties surrounding its ability to raise additional capital as needed, as discussed below, raise substantial doubt about its ability to continue as a going concern for a period of one year following the date that these financial statements are issued. The consolidated financial statements do not include any adjustments for the recovery and classification of assets or the amounts and classification of liabilities that might be necessary should the Company be unable to continue as a going concern.

The Company plans to continue to fund its losses from operations through cash, cash equivalents and investments on hand, as well as through future equity offerings, debt financings, other third party funding, and potential licensing or collaboration arrangements, including equity financing through the common stock purchase agreement the Company entered into with Aspire Capital Fund, LLC in March 2017 for the purchase of up to $21.0 million of the Company's stock over a 30 month period and/or the at-the-market equity offering sales agreement the Company entered into with Stifel, Nicolaus & Company, Incorporated in February 2016 for the sale of up to $25.0 million of the Company's stock. There can be no assurance that additional funds will be available when needed from any source or, if available, will be available on terms that are acceptable to the Company. Even if the Company raises additional capital, it may also be required to modify, delay or abandon some of its plans which could have a material adverse effect on the Company's business, operating results and financial condition and the Company's ability to achieve its intended business objectives. Any of these actions could materially harm the Company's business, results of operations and future prospects.

Use of Estimates

The Company's consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States (GAAP). The preparation of the Company's consolidated 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, expenses incurred for clinical trials 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.

Cash and Cash Equivalents

Cash and cash equivalents consist of cash and highly liquid investments with original maturities of three months or less at the date of purchase. The carrying amounts approximate fair value due to the short maturities of these investments. Cash and cash equivalents include cash in readily available checking and money market funds, U.S. treasury securities, as well as certificates of deposit.

Concentration of Credit Risk

Financial instruments that potentially subject the Company to significant concentration of credit risk consist primarily of cash and cash equivalents. 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. Leasehold improvements are amortized over the shorter of the lease term or estimated useful life of the related assets. Repairs and maintenance costs are charged to expense as incurred.

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 consolidated balance sheets. Tenant improvement allowances and other lease incentives are recorded as liabilities and are amortized on a straight-line basis over the term of the lease as reductions to rent expense.

Revenue Recognition

Through December 31, 2017, all of the Company's revenue was 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) collectability 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.

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 consolidated statements of operations.

Milestones

The Company uses the milestone method of accounting and revenue is recognized when earned, as evidenced by written acknowledgment 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.

Clinical Trial Expense Accruals

As part of the process of preparing the Company's financial statements, the Company is required to estimate expenses resulting from its obligations under contracts with vendors, clinical sites, contract research organizations (CROs), and consultants in connection with conducting clinical trials. The financial terms of these contracts vary and may result in payment flows that do not match the periods over which materials or services are provided under such contracts.

The Company's objective is to reflect the appropriate trial expenses in its financial statements by recording those expenses in the period in which services are performed and efforts are expended. The Company accounts for these expenses according to the progress of the clinical trial as measured by patient progression and the timing of various aspects of the trial. The Company determines accrual estimates through discussion with the clinical sites and applicable personnel and outside service providers as to the progress or state of consummation of trials. During the course of a clinical trial, the Company adjusts the clinical expense recognition if actual results differ from its estimates. The Company makes estimates of accrued expenses as of each balance sheet date based on the facts and circumstances known at that time. The Company's clinical trial accruals are dependent upon accurate reporting by clinical sites, CROs and other third-party vendors. Although the Company does not expect its estimates to differ materially from amounts actually incurred, its understanding of the status and timing of services performed relative to the actual status and timing of services performed may vary and may result in reporting amounts that are too high or too low for any particular period. For the three years ended in the period December 31, 2017, there were no material adjustments to the Company's prior period estimates of accrued expenses for clinical trials.

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.

Stock-Based Compensation

Stock-based compensation expense represents the grant date fair value of employee stock option grants, employee restricted stock unit grants (RSUs) and employee stock purchase plan (ESPP) rights recognized as expense over the requisite service period of the awards (usually the vesting period) on a straight-line basis. The Company estimates the fair value of stock option grants and ESPP rights using the Black-Scholes option pricing model. The fair value of RSUs is based on the stock price on the date of grant.

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.

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 5,617, 7,878, and 6,555 weighted-average shares subject to repurchase or forfeiture from the weighted-average number of common shares outstanding for the years ended December 31, 2017, 2016, and 2015, respectively. 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. 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,		
	2017	2016	2015
Warrants to purchase common stock	103,865	57,173	57,173
Common stock options and restricted stock units	2,516,246	2,023,478	1,788,149
ESPP shares	3,653	2,857	143
	2,623,764	2,083,508	1,845,465

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 Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 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, 2017. The Company plans on adopting ASU 2014-09 using the modified retrospective approach and does not expect the adoption to have a material impact on its financial position and results of operations.

In February 2016, the FASB issued ASU 2016-02, *Leases*, which outlines a comprehensive lease accounting model and supersedes the current lease guidance. The new accounting standard requires lessees to recognize lease liabilities and corresponding right-of-use assets for all leases with lease terms of greater than twelve months. It also changes the definition of a lease and expands the disclosure requirements of lease arrangements. The new accounting standard must be adopted using the modified retrospective approach and is effective for public entities for annual reporting periods beginning after December 15, 2018 with early adoption permitted. The Company does not expect the adoption of ASU 2016-02 to have a material impact on its financial statements and related disclosures.

Recently Adopted Accounting Standards

In March 2016, the FASB issued ASU 2016-09, *Improvements to Employee Share-Based Payment Accounting*, which amends ASC Topic 718, Compensation – Stock Compensation. ASU 2016-09 includes an update which simplifies the accounting for employee share-based payment transactions, including the accounting for income taxes, forfeitures, and statutory tax withholding requirements, as well as classification in the statement of cash flows. ASU 2016-09 was effective for public entities for annual reporting periods beginning after December 15, 2016, and interim periods within that reporting period. The Company adopted the standard in the first quarter of 2017, and has made an accounting policy change to record forfeitures as they occur, which resulted in no change to its financial statements and related disclosures.

2. Short-Term Investments, Cash Equivalents and Fair Value Measurements

At December 31, 2017, short-term investments consisted of U.S. treasury securities. The Company classifies all investments as available-for-sale, as the sale of such investments may be required prior to maturity to implement management strategies. These investments are carried at amortized cost which approximates fair value. A decline in the market value of any short-term investment below cost that is determined to be other-than-temporary will result in a revaluation of its carrying amount to fair value. The impairment is charged to earnings and a new cost basis for the security is established. No such impairment charges were recorded for any period presented.

Realized gains and losses from the sale of short-term investments, if any, are determined on a specific identification basis. Realized gains and losses and declines in value judged to be other-than-temporary, if any, on available-for-sale securities are included in other income or expense on the consolidated statements of operations. Realized and unrealized gains and losses during the periods presented were immaterial. Premiums and discounts are amortized or accreted over the life of the related security as an adjustment to yield using the straight-line method and are included in interest income on the consolidated statements of operations. Interest and dividends on securities classified as available-for-sale are included in interest income on the consolidated statements of operations. At December 31, 2017, the remaining contractual maturities of all available-for-sale investments were less than one year.

The carrying amounts of cash and cash equivalents, 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 fair value of long-term debt approximates its carrying 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.

Assets and liabilities are classified based on the lowest level of input that is significant to the fair value measurements.

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.

Cash equivalents and short-term investments, all of which are classified as available-for-sale securities, consisted of the following (in thousands):

	December 31, 2017			
	Cost	Unrealized Gain	Unrealized (Loss)	Estimated Fair Value
Money market funds	$ 5,488	$ —	$ —	$ 5,488
U.S. treasury securities	4,999	—	—	4,999
	$ 10,487	$ —	$ —	$ 10,487
Classified as:				
Cash equivalents				$ 5,488
Short-term investments				4,999
Total Cash equivalents and Short-term investments				$ 10,487

The fair values of the Company's assets and liabilities, which are measured at fair value on a recurring basis, were determined using the following inputs (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)
At December 31, 2017				
Money market funds and U.S. treasury securities, included in Cash equivalents and Short-term investments	$ 10,487	$ —	$ 10,487	$ —
At December 31, 2016				
Money market funds and U.S. treasury securities, included in Cash equivalents and Short-term investments	$ 23,346	$ —	$ 23,346	$ —

3. Property and Equipment

Property and equipment consisted of the following (in thousands):

	December 31,	
	2017	2016
Computer and office equipment	$ 133	$ 115
Furniture and fixtures	19	19
Leasehold improvements	21	124
	173	258
Less accumulated depreciation and amortization	(100)	(176)
	$ 73	$ 82

Depreciation expense related to property and equipment totaled approximately $48,000, $94,000 and $51,000 for the years ended December 31, 2017, 2016 and 2015, respectively.

4. Long-Term Debt

Long-term debt and unamortized debt discount balances were as follows (in thousands):

	December 31, 2017	December 31, 2016
Long-term debt	$ 8,000	$ 8,000
Less debt discount, net of current portion	(197)	(537)
Long-term debt, net of debt discount	7,803	7,463
Less current portion of long-term debt	(3,200)	(333)
Long-term debt, net of current portion	$ 4,603	$ 7,130
Current portion of long-term debt	$ 3,200	$ 333
Current portion of debt discount	(363)	-
Current portion of long-term debt, net	$ 2,837	$ 333

In January 2017, the Company entered into a second amendment to its Amended and Restated Loan and Security Agreement with Silicon Valley Bank (SVB) (the 2017 Amended SVB Loan) under which the Company borrowed $8.0 million, all of which was immediately used to repay the Company's existing loan with SVB (the 2015 Amended SVB Loan). In accordance with the terms of the 2015 Amended SVB Loan, the Company paid a final payment of $0.9 million associated with the payoff of the 2015 Amended SVB Loan. The transaction was accounted for as a debt modification.

The 2017 Amended SVB Loan provides for interest to be paid at a rate of 8.55% per annum. Interest-only payments were due monthly through December 2017. Thereafter, in addition to interest accrued during such period, the monthly payments will include an amount equal to the outstanding principal at December 31, 2017 divided by 30 months. At maturity (or earlier prepayment), the Company is also required to make a final payment equal to 4.0% of the original principal amount borrowed.

The 2017 Amended SVB Loan provides for prepayment fees of 2.0% of the amount prepaid if the prepayment occurs after January 25, 2018 but prior to January 25, 2019 and 1.0% of the amount prepaid if the prepayment occurs thereafter.

Except as described above, the 2017 Amended SVB Loan is subject to the same material terms set forth in the 2015 Amended SVB Loan Agreement. Consistent with the terms of the 2015 Amended SVB Loan agreements, the 2017 Amended SVB Loan is collateralized by substantially all of the Company's assets, other than the Company's intellectual property, and 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. 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 2017 Amended SVB Loan.

In connection with the 2017 Amended SVB Loan the Company issued SVB a warrant to purchase 46,692 shares of its common stock at an exercise price of $5.14 per share. The warrant is fully exercisable and expires on January 25, 2024. The fair value of the warrant and the final payment related to the 2017 Amended SVB Loan are being amortized to interest expense using the effective interest method over the term of the debt, in addition to the remaining unamortized discounts related to the 2015 Amended SVB Loan.

At December 31, 2017, the Company had the following exercisable outstanding warrants for the purchase of common stock issued in connection with the Company's loan agreements with SVB:

Expiration	Number of shares	Exercise price
May 13, 2022	18,415	$ 10.86
November 14, 2023 through June 4, 2024	38,758	7.74
January 25, 2024	46,692	5.14
	103,865	

Future minimum principal and interest payments under the 2017 Amended SVB Loan including the final payment, as of December 31, 2017 are as follows (in thousands):

2018	$	3,766
2019		3,489
2020		1,961
		9,216
Less interest and final payment		(1,216)
Long-term debt	$	8,000

5. Commitments and Contingencies

Lonza Biologics Tuas Pte Ltd (Lonza)

On February 22, 2017, the Company entered into a long-term manufacturing agreement, or the Manufacturing Agreement, with Lonza for the long term manufacture and supply of registration and commercial batches of TRC105, the Company's lead drug product candidate. Under the Manufacturing Agreement, Lonza has agreed to manufacture TRC105 pursuant to purchase orders and in accordance with the manufacturing specifications agreed upon between the Company and Lonza. The Company is required to purchase certain batches of TRC105 prior to regulatory approval with a total estimated cost of approximately $15.0 million. Following regulatory approval, the Company will be required to purchase a specified minimum number of batches annually with a total annual estimated cost of approximately $22.0 million. If the Company cancels any purchase orders, the Company may be obligated to pay certain cancellation fees. In addition, the Company will be obligated to pay a milestone fee to Lonza upon the earlier of the first approval of TRC105 by the U.S Food and Drug Administration (FDA) or European Medicines Agency (EMA) or the Company's receipt of a complete response letter or non-approvability letter (or equivalent communication) indicating that the rejection of the marketing application was not due to a deficiency in Lonza's facility, the manufacturing process or services performed by Lonza. At December 31, 2017, the Company had non-cancelable purchase obligations totaling $9.6 million under this agreement.

The Manufacturing Agreement has an initial term beginning on the effective date and ending on the seventh anniversary of the date of first regulatory approval of TRC105 by the FDA or EMA. The Manufacturing Agreement may be renewed for an additional three years upon the written agreement of both parties no later than the fifth anniversary of the date of first approval of TRC105 by the FDA or EMA.

Either party may terminate the Manufacturing Agreement due to a material breach of the Manufacturing Agreement by the other party, subject to prior written notice and a cure period, due to the insolvency or bankruptcy of the other party, or due to a force majeure event that prevents performance under the Manufacturing Agreement for at least six months. The Company may terminate the Manufacturing Agreement, subject to 60 days' written notice, if the Company discontinues the TRC105 program, whether due to a notice of non-approval or withdrawal of marketing approval by a regulatory agency or otherwise. In the event of a termination by the Company due to discontinuation of the TRC105 program or a termination by Lonza due to the Company's material breach or insolvency or bankruptcy, the Company would be obligated to pay to Lonza certain batch cancellation and/or early termination fees.

Facility Lease

The Company leases its office space under a non-cancelable operating lease that expires in April 2022 that may be extended for an additional term of 60 months. The lease is subject to base lease payments and additional charges for common area maintenance and other costs and includes certain lease incentives and tenant improvement allowances. Rent expense for each of the years ended December 31, 2017, 2016 and 2015 was $0.4 million, $0.4 million and $0.2 million, respectively.

Under the terms of the lease agreement, the Company provided the lessor with an irrevocable letter of credit in the amount of $175,000. The lessor is entitled to draw on the letter of credit in the event of any default by the Company under the terms of the lease.

Future minimum payments under the non-cancelable operating lease as of December 31, 2017 were as follows (in thousands):

2018	$	405
2019		423
2020		442
2021		461
2022		156
	$	1,887

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. At December 31, 2017, potential future milestone payments under these agreements, including future milestone payments associated with assets acquired from Janssen Pharmaceutica N.V. should they not exercise their option to regain their rights to certain assets as discussed in Note 7, totaled an aggregate of approximately $126.0 million.

6. Stockholders' Equity (Deficit)

Redeemable Convertible Preferred Stock

In connection with the completion of the Company's initial public offering on February 4, 2015, all of the outstanding shares of redeemable convertible preferred stock were converted into 6,369,567 shares of the Company's common stock; outstanding warrants to purchase 150,000 shares of Series A redeemable convertible preferred stock were converted into warrants to purchase 38,758 shares of the Company's common stock, and the Company's certificate of incorporation was amended and restated to authorize 200,000,000 shares of common stock and 10,000,000 shares of undesignated preferred stock. No preferred stock dividends were paid or declared by the Company.

Sales of Common Stock

In March 2017, the Company entered into a Common Stock Purchase Agreement (the Purchase Agreement) with Aspire Capital Fund, LLC (Aspire Capital) which provides that, upon the terms and subject to the conditions and limitations, Aspire Capital is committed to purchase up to an aggregate of $21.0 million of shares of the Company's common stock. Under the terms of the Purchase Agreement, the Company sold 222,222 shares of the Company's common stock to Aspire Capital at $4.50 per share for net proceeds of approximately $0.9 million upon execution of the Purchase Agreement and Aspire Capital is committed to purchase up to $20.0 million of additional shares of its common stock solely at TRACON's request from time to time during a 30 month period that began on May 1, 2017 and at prices based on the market price at the time of each sale, subject to certain conditions. In consideration for entering into the Purchase Agreement and concurrently with the execution of the Purchase Agreement, the Company issued 195,726 shares of its common stock to Aspire Capital, the fair value of which was recorded as offering costs in connection with the transaction.

In February 2016, the Company entered into an At-the-Market Equity Offering Sales Agreement (Sales Agreement) with Stifel, Nicolaus & Company, Incorporated (Stifel), pursuant to which it may sell from time to time, at its option, up to an aggregate of $25.0 million of the Company's shares of its common stock through Stifel, as sales agent. The Company is required to pay Stifel 2.5% of gross proceeds for the common stock sold through the Sales Agreement. During the year ended December 31, 2017, the Company sold approximately 1,037,000 shares of common stock through the Sales Agreement with Stifel for gross proceeds of approximately $3.5 million, and approximately $21.5 million of common stock remains available for sale under the Sales Agreement, subject to limitations on the amount of securities the Company may sell under its effective registration statement on Form S-3 within any 12 month period.

During November 2016, the Company completed an underwritten public offering of 3,018,750 shares of its common stock at an offering price of $5.75 per share. The Company received net proceeds from this offering of approximately $16.1 million, after deducting underwriting discounts, commissions and offering-related expenses of $1.3 million.

In September 2016, concurrent with its License and Option Agreement with Janssen Pharmaceutica N.V. (Janssen) and its affiliate, Johnson & Johnson Innovation-JJDC, Inc. (JJDC) (see Note 7), the Company issued and sold 840,022 shares of its common stock at a purchase price of $5.95 per share (determined by the average of the daily volume weighted average closing prices of the common stock as reported on NASDAQ for the five days prior to the date of the purchase) to JJDC for gross proceeds of $5.0 million. The Company also entered into an Investor Rights Agreement, pursuant to which the Company granted JJDC certain rights to require the Company to register the shares for resale under the Securities Act.

Stock Compensation Plans

2011 Equity Incentive Plan

The Company granted awards under the TRACON Pharmaceuticals, Inc. 2011 Equity Incentive Plan until January 2015. 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 made under the 2011 Plan generally vest on the last day of each month over 48 months from the vesting commencement date subject to continuous service. In connection with the adoption of the 2015 Equity Incentive Plan (the 2015 Plan), the Company terminated the 2011 Plan and no additional awards will be granted under the 2011 Plan.

2015 Equity Incentive Plan

Effective January 1, 2015, the Company's board of directors adopted the 2015 Equity Incentive Plan (the 2015 Plan). 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 Company or its subsidiaries. Initially, a total of 801,033 shares of common stock were 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 common stock outstanding on December 31st of the preceding calendar year or such other amount as the Company's board of directors may determine. The maximum term of the options granted under the 2015 Plan is no more than ten years. Grants generally vest at 25% one year from the vesting commencement date and ratably each month thereafter for a period of 36 months, subject to continuous service. In December 2015, the 2015 Plan was amended to allow an additional 500,000 shares of common stock to be used exclusively for the grant of equity awards as a material inducement for individuals to commence employment at the Company in compliance with NASDAQ Listing Rule 5635(c)(4).

Restricted Stock Units

In 2016, the Company issued RSUs to employees and members of the Board of Directors under the 2015 Equity Incentive Plan. The total grant-date fair value of RSUs that vested during the years ended December 31, 2017, and 2016 was $0.8 million and $0, respectively. The aggregate intrinsic value of outstanding RSUs at December 31, 2017 was $0.6 million and is based on the Company's closing market price per share on December 31, 2017 of $3.35. As of December 31, 2017, there was approximately $1.0 million of unrecognized compensation costs related to outstanding RSUs, which is expected to be recognized over a weighted average remaining period of 2.1 years.

Restricted stock unit activity under the 2015 Plan is summarized as follows:

	Number of Shares	Weighted Average Grant Date Fair Value
Outstanding at December 31, 2016	306,780	$ 7.70
Granted	-	-
Vested	(102,378)	7.47
Forfeited	(11,438)	6.11
Outstanding at December 31, 2017	192,964	$ 7.92

Stock Options

Stock option activity under all Plans is summarized as follows:

	Number of Options	Weighted-Average Exercise Price
Balance at December 31, 2016	1,716,698	$ 7.54
Granted	689,527	4.76
Exercised	(53,756)	0.83
Forfeited	(29,187)	6.39
Balance at December 31, 2017	2,323,282	$ 6.88

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
December 31, 2017:				
Options outstanding	2,323,282	$ 6.88	7.19	$ 1,293
Options vested and expected to vest	2,323,282	$ 6.88	7.19	$ 1,293
Options exercisable	1,359,286	$ 7.07	6.20	$ 1,198

The weighted-average grant date fair value per share of employee option grants during the years ended December 31, 2017, 2016 and 2015 was $3.45, $6.68 and $12.97, respectively. The aggregate intrinsic value used in the above table of options at December 31, 2017 is based on the Company's closing market price per common share on December 31, 2017 of $3.35. The Company received approximately $44,900, $6,500 and $54,200 in proceeds from the exercise of stock options during the years ended December 31, 2017, 2016 and 2015, respectively. The total intrinsic value of options exercised was approximately $0.2 million, $78,000 and $0.8 million during the years ended December 31, 2017, 2016 and 2015, respectively. The total grant-date fair value of options that vested during the years ended December 31, 2017, 2016 and 2015 was $1.9 million, $3.4 million and $0.8 million, respectively.

Employee Stock Purchase Plan

On January 1, 2015, the Company's board of directors adopted the ESPP, which became effective upon the pricing of the Company's initial public offering on January 29, 2015. The ESPP permits participants to purchase common stock through payroll deductions of up to 15% of their eligible compensation. Initially, a total of 183,462 shares of common stock was 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 2016 fiscal year, by an amount equal to the lessor of: (i) 366,925 shares; (ii) 1% of the total number of shares of common stock outstanding on December 31st of the preceding calendar year; or (iii) such other amount as the Company's board of directors may determine. Stock compensation expense for the years ended December 31, 2017 and 2016 related to the ESPP was immaterial.

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,		
	2017	2016	2015
Risk-free interest rate	2.1 %	1.6 %	1.7 %
Expected volatility	83.0 %	80.0 %	74.0 %
Expected term (in years)	6.2	6.3	6.3
Expected dividend yield	— %	— %	— %

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.

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 was as follows (in thousands):

	Years Ended December 31,		
	2017	2016	2015
Research and development	$ 1,482	$ 1,090	$ 1,038
General and administrative	1,712	1,993	1,050
	$ 3,194	$ 3,083	$ 2,088

As of December 31, 2017 and 2016, the unrecognized compensation cost related to outstanding time-based options was $3.7 million and $4.0 million, respectively, and is expected to be recognized as expense over approximately 2.1 years and 2.1 years, respectively.

Common Stock Reserved for Future Issuance

Common stock reserved for future issuance was as follows:

	December 31,	
	2017	2016
Common stock warrants	103,865	57,173
Common stock options and restricted stock units granted and outstanding	2,516,246	2,023,478
Awards available under the 2015 Plan	772,573	749,753
Shares available under the Employee Stock Purchase Plan	378,367	261,840
	3,771,051	3,092,244

7. Collaborations

Santen

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 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, payments 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 were delivered during the 41-month period over which the Company provided technical and regulatory support to Santen. At inception and through December 31, 2017, 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. Accordingly, the Company recognized revenue for the fixed or determinable collaboration consideration on a straight-line basis over the 41-month period over which it delivered 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. During the years ended December 31, 2017 and 2015, a development milestone that was deemed a substantive milestone at the inception of the arrangement was achieved, and accordingly, the milestone payments of $7.0 million and $3.0 million, respectively, were recognized as revenue.

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 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 $8.8 million, $3.4 million and $7.9 million for the years ended December 31, 2017, 2016 and 2015, respectively, and had deferred revenue of $0.0 million and $1.3 million as of December 31, 2017 and 2016, respectively.

Janssen

In September 2016, the Company entered into a license and option agreement with Janssen (the License and Option Agreement) under which Janssen granted the Company a license to technology and intellectual property to develop, manufacture and commercialize two compounds: a small molecule inhibitor of androgen receptor and androgen receptor mutations (the AR Mutant Program or TRC253) which is intended for the treatment of men with prostate cancer, and an inhibitor of NF-kB inducing kinase (the NIK Program or TRC694, and, together with the AR Mutant Program, the Programs).

With respect to the AR Mutant Program, Janssen maintains an option, which is exercisable until 90 days after the Company demonstrates clinical proof of concept, to regain the rights to the licensed intellectual property and to obtain an exclusive license to commercialize the compounds and certain other specified intellectual property developed under the AR Mutant Program. If Janssen exercises the option, Janssen will be obligated to pay the Company (i) a one-time option exercise fee of $45.0 million; (ii) regulatory and commercial based milestone payments totaling up to $137.5 million upon achievement of specified events; and (iii) royalties in the low single digits on annual net sales of AR Mutant Program products. If Janssen does not exercise the option, the Company would then have the right to retain worldwide development and commercialization rights to the AR Mutant Program, in which case, the Company would be obligated to pay to Janssen (x) development and regulatory based milestone payments totaling up to $45.0 million upon achievement of specified events, and (y) royalties in the low single digits based on annual net sales of AR Mutant Program products, subject to certain specified reductions.

With respect to the NIK Program, Janssen maintains a right, which is exercisable within 90 days following the date on which the Company demonstrates clinical proof of concept with respect to the NIK Program, to negotiate exclusively for a period of six months for a reversion of the related rights in the licensed intellectual property and to obtain an exclusive license to commercialize the compounds and certain other specified intellectual property developed under the NIK Program. If Janssen does not exercise its right of first negotiation, or, if after exercise of such right, the Company and Janssen are unable to reach an agreement on the terms of a reversion and exclusive license, and, in either case, the Company continues the development of the NIK Program, then the Company would be obligated to pay Janssen (i) development and regulatory based milestone payments totaling up to $60.0 million upon achievement of specified events, and (ii) royalties in the low single digits based on annual net sales of NIK Program products, subject to certain specified reductions.

No consideration was exchanged for these assets on the acquisition date. Given the early preclinical stage of development of these assets and the low likelihood of success of development through regulatory approval on the acquisition date, no value was assigned to these assets in the accompanying consolidated balance sheet.

The Company is obligated to use diligent efforts to develop the Programs according to agreed upon development plans, timelines and budgets. For each Program that the Company retains, the Company is further obligated to use commercially reasonable efforts to develop, obtain marketing approval for, and commercialize licensed products. Until the expiration or earlier termination of the development term of the AR Mutant Program or the NIK Program, as applicable, under the License and Option Agreement, subject to specified exceptions, the Company has agreed not to research, develop or commercialize any compounds or products related to the AR Mutant Program or the NIK Program, as applicable, other than pursuant to the collaboration with Janssen.

The License and Option Agreement may be terminated for uncured breach, bankruptcy, or the failure or inability to demonstrate clinical proof of concept with respect to a particular Program during specified timeframes. In addition, the License and Option Agreement will automatically terminate (a) with respect to the AR Mutant Program, upon Janssen exercising its option in respect of the AR Mutant Program and making payment of the option exercise fee to the Company or, if Janssen does not exercise the option, upon the expiration of all payment obligations of the Company to Janssen with respect of the AR Mutant Program, and (b) with respect to the NIK Program, upon the Company and Janssen entering into an exclusive license agreement following Janssen's exercise of its right of first negotiation or, if Janssen's right of first negotiation with respect to the NIK Program expires and the Company and Janssen have not entered into an exclusive license agreement, upon the expiration of all payment obligations of the Company to Janssen with respect of the NIK Program. The Company may also terminate a Program or the License and Option Agreement in its entirety without cause, subject to specified conditions.

Ambrx, Inc.

In December 2017, the Company entered into a license agreement with Ambrx Inc. (Ambrx), for the development and commercialization of TRC105 in China. The license grants Ambrx the exclusive rights to use, develop, manufacture and commercialize TRC105 products in all indications (excluding ophthalmology which are held by Santen) in China (including Hong Kong and Macau) and Taiwan, or the Ambrx Territory. Ambrx also has the right to grant sublicenses to affiliates and third party collaborators, provided such sublicenses are consistent with the terms of the Company's agreement and excluding the rights licensed to the Company under the license with Lonza.

Ambrx has sole responsibility for funding, developing, seeking regulatory approval for and commercializing TRC105 products in the Ambrx Territory. Ambrx has the option to either pursue a China only development strategy at its sole expense, or upon mutual agreement of the Company and Ambrx, participate in the Company's ongoing global Phase 3 TAPPAS clinical trial in angiosarcoma by enrolling patients in this trial, and the Company may participate in an Ambrx-sponsored clinical trial in hepatocellular carcinoma, or any other indication Ambrx pursues in the Ambrx Territory.

In consideration of the rights granted to Ambrx under the agreement, the Company received a one-time upfront fee of $3.0 million. The license agreement provides for various types of payments, including the upfront payment, payments for various technical and regulatory support, payments for delivery of drug product, milestone payments, and royalties on net sales. The Company has identified multiple deliverables, which include at inception: (1) a license to patents, information and know-how related to TRC105, (2) collaboration, including technical and regulatory support provided by the Company, and (3) manufacturing and supply obligations. The Company anticipates that the first deliverable will be substantially delivered within the first three months of the agreement, the second deliverable will be delivered within the first nine months of the agreement, and the third deliverable will be delivered during the estimated 54-month period over which the Company will supply TRC105 to Ambrx. At inception and through December 31, 2017, 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. As the Company is the only manufacturer of TRC105 (through its contract manufacturer Lonza), a significant component of Ambrx's ability to utilize the license and know-how related to TRC105 lies in access to TRC105 drug supplies. 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. Accordingly, the Company will recognize revenue for the fixed or determinable collaboration consideration on a straight-line basis over the 54-month period over which it expects to deliver its manufacturing and supply obligations. In connection with the Ambrx agreement, at December 31, 2017, the Company had recorded $3.0 million of deferred revenue.

In addition, the Company is eligible to receive up to a total of $140.5 million in milestone payments upon the achievement of certain milestones, of which $10.5 million relates to the submission of certain regulatory filings and receipt of certain regulatory approvals and $130.0 million relates to the achievement of specified levels of product sales. The Company has determined that $0.5 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 the achievement of the milestone in accordance with the

milestone method of accounting. As of December 31, 2017, none of the development milestones had been achieved. The remaining $140.0 million of potential milestone payments are not substantive milestones as they do not require the efforts of the Company.

If TRC105 products are successfully commercialized in the territory, Ambrx 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. 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.

Ambrx may unilaterally terminate this agreement in its entirety for any reason or for no reason upon at least 90 days' 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 60 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 Ambrx's payment obligations.

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,		
	2017	2016	2015
Federal income taxes	$ (6,686)	$ (9,453)	$ (8,300)
State income taxes, net of federal benefit	(1,404)	—	—
Permanent items	1,170	717	277
Uncertain tax positions	(1,158)	1,644	749
Research and development credits	(2,719)	(2,078)	(881)
California net operating loss carryforwards	(2,208)	(1,054)	—
Rate change	—	(489)	—
Tax Cuts and Jobs Act	11,478	—	—
Other, net	(126)	5	82
Stock-based compensation	123	—	—
Change in valuation allowance	1,530	10,708	8,073
Provision for income taxes	$ —	$ —	$ —

Significant components of the Company's deferred tax assets are summarized as follows (in thousands):

	December 31,	
	2017	2016
Deferred tax assets:		
Net operating loss carryforwards	$ 23,198	$ 24,484
Research and development credits and Orphan Drug credits	6,518	3,262
Deferred revenue	—	441
Depreciation and amortization	414	229
Other, net	1,802	1,753
Total deferred tax assets	31,932	30,169
Valuation allowance	(31,932)	(30,169)
Net deferred tax assets	$ —	$ —

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, 2017, 2016 and 2015 was $1.5 million, $10.7 million and $8.1 million, respectively.

At December 31, 2017, the Company had federal and California NOL carryforwards of approximately $83.1 million and $85.3 million, respectively. The federal and California NOL carryforwards will begin to expire in 2030, unless previously utilized. At December 31, 2017, the Company also had federal and California research and development and Orphan Drug credit carryforwards of

approximately $7.0 million and $1.6 million, respectively. The federal research and development and Orphan Drug credit carryforwards will begin expiring in 2031 unless previously utilized. The California research credit will carry forward indefinitely under current law.

Pursuant to Sections 382 and 383 of the Code, the 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 completed a Section 382/383 analysis regarding the limitation of NOL and research and development credit carryforwards as of December 31, 2015 and as a result of the analysis, an ownership change was determined to have occurred at the time of the Company's initial public offering in January 2015. Future ownership changes may further limit the Company's ability to utilize the remaining NOL and research and development credit carryforwards.

On December 22, 2017, President Trump signed into law the Tax Cuts and Jobs Act (the Tax Act). The Act amends the Internal Revenue Code to reduce tax rates and modify policies, credits, and deductions for individuals and businesses. For businesses, the Act reduces the corporate income tax rate from a maximum of 35% to a flat 21% rate. The rate reduction is effective on January 1, 2018. As a result of the rate reduction, the Company has reduced the deferred tax asset balance as of December 31, 2017 by $11.5 million. Due to the Company's full valuation allowance position, the Company has also reduced the valuation allowance by the same amount. In accordance with Staff Accounting Bulletin 118, as of December 31, 2017, the Company has not completed its accounting for the tax effects of the enactment of the Tax Act; however, the Company has made a reasonable estimate of the effects on its existing deferred tax balances.

Due to uncertainties which currently exist in the interpretation of the provisions of the Tax Act regarding Internal Revenue Code Section 162(m), the Company has not completed its evaluation of the potential impacts of IRC Section 162(m) as amended by the Tax Act on its financial statements.

The changes in the Company's unrecognized tax benefits are summarized as follows (in thousands):

Balance at December 31, 2014	$	369
Increase related to prior year positions		1,135
Increase related to current year positions		318
Balance at December 31, 2015		1,822
Increase related to prior year positions		1,902
Increase related to current year positions		453
Balance at December 31, 2016		4,177
Decrease related to prior year positions		(2,701)
Increase related to current year positions		690
Balance at December 31, 2017	$	2,166

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 consolidated balance sheets as of December 31, 2017 and 2016 and has not recognized interest or penalties in the accompanying consolidated statements of operations for the three years in the period ended December 31, 2017.

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, 2017, 2016 and 2015 totaled approximately $181,000, $172,000 and $107,000, respectively.

10. Quarterly Financial Data (Unaudited)

The following financial information reflects all normal recurring adjustments, which are, in the opinion of management, necessary for a fair statement of the results of the interim periods. Summarized quarterly data for the years ended December 31, 2017 and 2016 are as follows (in thousands, except per share data):

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
2017				
Revenue	$ 626	$ 631	$ 7,498	$ -
Total operating expenses	$ 7,546	$ 6,961	$ 6,104	$ 6,354
Consolidated net income (loss)	$ (7,147)	$ (6,566)	$ 1,170	$ (6,560)
Basic and diluted net income (loss) attributable to common stockholders	$ (0.44)	$ (0.40)	$ 0.07	$ (0.37)
2016				
Revenue	$ 1,210	$ 807	$ 815	$ 617
Total operating expenses	$ 7,504	$ 8,817	$ 6,412	$ 6,692
Consolidated net loss	$ (6,526)	$ (8,297)	$ (5,871)	$ (6,314)
Basic and diluted net loss attributable to common stockholders	$ (0.54)	$ (0.68)	$ (0.48)	$ (0.45)

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None.

Item 9A. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures designed to provide reasonable assurance of achieving the objective that information in our Exchange Act reports is recorded, processed, summarized and reported within the time periods specified and pursuant to the requirements of the SEC's rules and forms and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow for timely decisions regarding required disclosures. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

As required by SEC Rule 13a-15(b), we carried out an evaluation, with the participation of our Management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures as of December 31, 2017, the end of the period covered by this report. Based upon the foregoing, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective at a reasonable assurance level as of December 31, 2017.

Management's Report on Internal Control Over Financial Reporting

Our Management is responsible for establishing and maintain adequate internal control over our financial reporting. Internal control over financial reporting is defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act as a process designed by, or under the supervision of, a company's principal executive and principal financial officers and effected by a company's board of directors, management and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. GAAP. Our internal control over financial reporting includes those policies and procedures that:

- pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect our transactions and dispositions of our assets;
- provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. GAAP, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and
- provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on our financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our Management assessed the effectiveness of our internal control over financial reporting as of December 31, 2017. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in its 2013 Internal Control — Integrated Framework.

Based on our assessment, our Management has concluded that, as of December 31, 2017, our internal control over financial reporting was effective based on those criteria.

Pursuant to Regulation S-K Item 308(b), this Annual Report on Form 10-K does not include an attestation report of our company's registered public accounting firm regarding internal control over financial reporting.

Changes in Internal Control Over Financial Reporting

We regularly review our system of internal control over financial reporting and make changes to our processes and systems to improve controls and increase efficiency, while ensuring that we maintain an effective internal control environment. Changes may include such activities as implementing new, more efficient systems, consolidating activities, and migrating processes. During the quarter ended December 31, 2017, there were no changes in our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information.

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

Information required by this item will be contained in our definitive proxy statement to be filed with the Securities and Exchange Commission on Schedule 14A in connection with our 2018 Annual Meeting of Stockholders or the Proxy Statement, which is expected to be filed not later than 120 days after the end of our fiscal year ended December 31, 2017, under the headings “Executive Officers,” “Election of Directors,” “Information Regarding the Board of Directors and Corporate Governance,” and “ Section 16(a) Beneficial Ownership Reporting Compliance,” and is incorporated herein by reference.

Item 11. Executive Compensation.

The information required by this item regarding executive compensation is incorporated by reference to the information set forth in the sections titled “Executive Compensation” in our Proxy Statement.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The information required by this item regarding security ownership of certain beneficial owners and management is incorporated by reference to the information set forth in the section titled “Security Ownership of Certain Beneficial Owners and Management” in our Proxy Statement.

The information required by Item 201(d) of Regulation S-K is incorporated by reference to the information set forth in the section titled “Executive Compensation” in our Proxy Statement.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required by this item regarding certain relationships and related transactions and director independence is incorporated by reference to the information set forth in the sections titled “Transactions with Related Parties” and “Election of Directors – Independence of the Board of Directors,” respectively, in our Proxy Statement.

Item 14. Principal Accountant Fees and Services.

The information required by this item regarding principal accountant fees and services is incorporated by reference to the information set forth in the section titled “Principal Accountant Fees and Services” in our Proxy Statement.

PART IV

Item 15. Exhibits and Financial Statement Schedules.

(a) Documents filed as part of this report.

1. Financial Statements

The consolidated financial statements of TRACON Pharmaceuticals, Inc. listed below are set forth in Item 8 of this Annual Report for the year ended December 31, 2017:

2. Financial Statement Schedules

These schedules have been omitted because the required information is included in the financial statements or notes thereto or because they are not applicable or not required.

3. Exhibits

Exhibit Number	Description of Document
3.1(1)	Amended and Restated Certificate of Incorporation, as currently in effect.
3.2(1)	Amended and Restated Bylaws, as currently in effect.
4.1(2)	Form of Common Stock Certificate of the Registrant.
4.2(2)	Amended and Restated Investors' Rights Agreement by and among the Registrant and certain of its stockholders, dated September 19, 2014.
4.3(8)	Investor Agreement by and between the Registrant and Johnson & Johnson Innovation-JJDC, Inc. dated September 27, 2016.
4.4(13)	Registration Rights Agreement, by and between the Registrant and Aspire Capital Fund, LLC, dated March 14, 2017.
4.5(13)	Common Stock Purchase Agreement, by and between the Registrant and Aspire Capital Fund, LLC, dated March 14, 2017.
10.1+(2)	Form of Indemnity Agreement by and between the Registrant and its directors and officers.
10.2+(2)	TRACON Pharmaceuticals, Inc. 2011 Equity Incentive Plan and Forms of Stock Option Agreement and Notice of Exercise thereunder.
10.3+(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, as amended December 14, 2015.
10.4+(7)	TRACON Pharmaceuticals, Inc. Non-Employee Director Compensation Policy, as amended June 1, 2016.
10.5+(4)	TRACON Pharmaceuticals, Inc. 2015 Employee Stock Purchase Plan.
10.6+(12)	TRACON Pharmaceuticals, Inc. Bonus Plan, as amended January 20, 2017.
10.7+(12)	Amended and Restated Employment Agreement by and between the Registrant and Charles P. Theuer, M.D., Ph.D., dated February 27, 2017.
10.8+(12)	Amended and Restated Employment Agreement by and between the Registrant and H. Casey Logan, M.B.A., dated February 27, 2017.
10.9+(12)	Employment Agreement by and between the Registrant and Patricia Bitar, dated February 27, 2017.

Exhibit Number	Description of Document
10.10+(12)	Amended and Restated Severance Agreement by and between the Registrant and Patricia Bitar, dated February 27, 2017.
10.11+(2)	TRACON Pharmaceuticals, Inc. Severance Plan and Summary Plan Description.
10.12+(12)	Severance Agreement by and between the Registrant and H. Casey Logan, M.B.A., dated February 27, 2017.
10.13*(2)	License Agreement by and between the Registrant and Santen Pharmaceutical Co., Ltd., dated March 3, 2014, as amended.
10.14*(6)	Second Amendment to License Agreement by and between the Registrant and Santen Pharmaceutical Co., Ltd., dated January 31, 2016.
10.15*(2)	License Agreement by and between 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.
10.16*(2)	License Agreement by and between the Registrant and Case Western Reserve University, dated August 2, 2006.
10.17*(4)	Amendment to License Agreement by and between the Registrant and Case Western Reserve University, dated April 3, 2015.
10.18*(2)	License Agreement by and between the Registrant and Lonza Sales AG, dated June 29, 2009.
10.19*(10)	License and Option Agreement by and between the Registrant and Janssen Pharmaceutica N.V. dated September 27, 2016.
10.20(2)	Warrant to Purchase Stock issued to Silicon Valley Bank on November 14, 2013.
10.21(2)	Warrant to Purchase Stock issued to Silicon Valley Bank on June 4, 2014.
10.22(4)	Warrant to Purchase Stock issued to Silicon Valley Bank on May 13, 2015.
10.23(9)	Warrant to Purchase Stock issued to Silicon Valley Bank on January 25, 2017.
10.24*(8)	Stock Purchase Agreement by and between the Registrant and Johnson & Johnson-JJDC, Inc. dated September 27, 2016.
10.25(5)	At-the-Market Equity Offering Sales Agreement, dated as of February 1, 2016, by and between the Registrant and Stifel, Nicolaus & Company, Incorporated.
10.26(4)	Amended and Restated Loan and Security Agreement by and between the Registrant and Silicon Valley Bank, dated May 13, 2015.
10.27(7)	First Amendment to Amended and Restated Loan and Security Agreement by and between the Registrant and Silicon Valley Bank, dated August 9, 2016.
10.28(9)	Second Amendment to Amended and Restated Loan and Security Agreement by and between the Registrant and Silicon Valley Bank, dated January 25, 2017.
10.29*(2)	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.
10.30(6)	Amendment #2 to 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 November 12, 2015.
10.31*(2)	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.
10.32(6)	Amendment #2 to 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 27, 2016.
10.33*(2)	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.
10.34*(2)	Sponsored Research Agreement by and between the Registrant and Tufts Medical Center, Inc., dated December 16, 2014.

Exhibit Number	Description of Document
10.35(11)	Lease by and between the Registrant and 4350 La Jolla Village LLC, dated December 12, 2016.
10.36*(14)	Manufacturing Agreement by and between the Registrant and Lonza Biologics Tuas Pte Ltd, dated March 27, 2017.
10.37*(15)	Amendment No. 1 to the Manufacturing Agreement by and between the Registrant and Lonza Biologics Tuas Pte Ltd dated May 24, 2017.
23.1	Consent of Independent Registered Public Accounting Firm.
24.1	Power of Attorney. Reference is made to the signature page hereto.
31.1	Certification of the Principal Executive Officer pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934.
31.2	Certification of the Principal Financial Officer pursuant to Rule 13a-14(a) or 15d-14(a) of the Securities Exchange Act of 1934.
32.1	Certification of Principal Executive Officer pursuant to Rule 13a-14(b) or 15d-14(b) of the Exchange Act and 18 U.S.C. Section 1350.
32.2	Certification of Principal Financial Officer pursuant to Rule 13a-14(b) or 15d-14(b) of the Exchange Act and 18 U.S.C. Section 1350.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

+ Indicates management contract or compensatory plan.
* Confidential treatment has been granted or requested with respect to certain portions of this exhibit. Omitted portions have been filed separately with the SEC.

(1) Incorporated by reference to the Registrant's Current Report on Form 8-K, filed with the SEC on February 4, 2015.
(2) Incorporated by reference to the Registrant's Registration Statement on Form S-1 (File No. 333-201280), as amended.
(3) Incorporated by reference to the Registrant's Current Report on Form 8-K, filed with the SEC on December 17, 2015.
(4) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2015, filed with the SEC on May 14, 2015.
(5) Incorporated by reference to the Registrant's Current Report on Form 8-K, filed with the SEC on February 1, 2016.
(6) Incorporated by reference to the Registrant's Annual Report on Form 10-K, filed with the SEC on February 19, 2016.
(7) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016, filed with the SEC on August 11, 2016.
(8) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2016, filed with the SEC on November 9, 2016.
(9) Incorporated by reference to the Registrant's Current Report on Form 8-K, filed with the SEC on January 31, 2017.
(10) Incorporated by reference to the Registrant's Quarterly Report on Form 10-Q/A for the quarter ended September 30, 2016, filed with the SEC on February 16, 2017.
(11) Incorporated by reference to the Registrant's Current Report on Form 8-K, filed with the SEC on December 13, 2016.
(12) Incorporated by reference to the Registrant's Annual Report on Form 10-K, filed with the SEC on March 1, 2017.
(13) Incorporated by reference to the Registrant's Current Report on Form 8-K, filed with the SEC on March 14, 2017.
(14) Incorporated by reference to the Registrant's Registration Statement on Form S-1 (File No. 333-216962), filed with the SEC on March 27, 2017.
(15) Incorporated by reference to the Registrant's Current Report on Form 8-K, filed with the SEC on May 26, 2017.

Signatures

Pursuant to the requirements of the Section 13 or 15(d) of the Securities and Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

TRACON Pharmaceuticals, Inc.

Date: February 28, 2018

By: /s/ CHARLES P. THEUER, M.D., PH.D.
Charles P. Theuer, M.D., Ph.D.
President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Dr. Charles Theuer, M.D., Ph.D., and Patricia L. Bitar, CPA, and each of them, his true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this report, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or either of them, or their or his substitutes or substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and 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)*	February 28, 2018
/s/ Patricia L. Bitar, CPA Patricia L. Bitar, CPA	Chief Financial Officer, Assistant Secretary and Treasurer *(Principal Financial and Accounting Officer)*	February 28, 2018
/s/ William R. LaRue William R. LaRue	Member of the Board of Directors	February 28, 2018
/s/ Martin A. Mattingly, Pharm. D. Martin A. Mattingly, Pharm.D.	Member of the Board of Directors	February 28, 2018
/s/ J. Rainer Twiford, J.D., PH.D J. Rainer Twiford, J.D., Ph.D.	Member of the Board of Directors	February 28, 2018
/s/ Paul Walker Paul Walker	Member of the Board of Directors	February 28, 2018
/s/ Stephen T. Worland Stephen T. Worland., Ph.D.	Member of the Board of Directors	February 28, 2018

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the following Registration Statements:

(1)Registration Statement (Form S-8 No. 333-201808) pertaining to the 2011 Equity Incentive Plan, 2015 Equity Incentive Plan, and 2015 Employee Stock Purchase Plan of TRACON Pharmaceuticals, Inc.,

(2)Registration Statement (Form S-8 No. 333-209592) pertaining to the 2015 Equity Incentive Plan, and 2015 Employee Stock Purchase Plan of TRACON Pharmaceuticals, Inc.,

(3)Registration Statement (Form S-8 No. 333-216347) pertaining to the 2015 Equity Incentive Plan, and 2015 Employee Stock Purchase Plan of TRACON Pharmaceuticals, Inc.,

(4)Registration Statement (Form S-1 No. 333-216962) of TRACON Pharmaceuticals, Inc., and

(5)Registration Statement (Form S-3 No. 333-209313) of TRACON Pharmaceuticals, Inc.;

of our report dated February 28, 2018, with respect to the consolidated financial statements of TRACON Pharmaceuticals, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2017.

/s/ Ernst & Young LLP

San Diego, California
February 28, 2018

Exhibit 31.1

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Charles P. Theuer, M.D., Ph.D., certify that:

1. I have reviewed this Annual Report on Form 10-K of TRACON Pharmaceuticals, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

c. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 28, 2018

/s/ Charles P. Theuer, M.D., Ph.D.
Charles P. Theuer, M.D., Ph.D.
President and Chief Executive Officer

Exhibit 31.2

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Patricia L. Bitar, CPA, certify that:

1. I have reviewed this Annual Report on Form 10-K of TRACON Pharmaceuticals, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:

a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

c. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 28, 2018

/s/ Patricia L. Bitar, CPA
Patricia L. Bitar, CPA
Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Charles P. Theuer, M.D., PhD., President and Chief Executive Officer of TRACON Pharmaceuticals, Inc. (the "Registrant"), do hereby certify in accordance with 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

(1) this Annual Report on Form 10-K of the Registrant, to which this certification is attached as an exhibit (the "Report"), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m); and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

Date: February 28, 2018

/s/ Charles P. Theuer, M.D., Ph.D.
Charles P. Theuer, M.D., Ph.D
President and Chief Executive Officer

The foregoing certification is being furnished solely pursuant to 18 U.S.C. Section 1350 and is not being filed as part of the Report or as a separate disclosure document.

Exhibit 32.2

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

I, Patricia L. Bitar, CPA, Chief Financial Officer of TRACON Pharmaceuticals, Inc. (the "Registrant"), do hereby certify in accordance with 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of my knowledge:

(1) this Annual Report on Form 10-K of the Registrant, to which this certification is attached as an exhibit (the "Report"), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m); and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Registrant.

Date: February 28, 2018

/s/ Patricia L. Bitar, CPA
Patricia L. Bitar, CPA
Chief Financial Officer

The foregoing certification is being furnished solely pursuant to 18 U.S.C. Section 1350 and is not being filed as part of the Report or as a separate disclosure document.