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As filed with the Securities and Exchange Commission on March 27, 2017

Registration No. 333-

# UNITED STATES
# SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

# FORM S-1
# REGISTRATION STATEMENT

*UNDER*

*THE SECURITIES ACT OF 1933*

# TRACON PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

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

8910 University Center Lane, Suite 700
San Diego, California 92122
(858) 550-0780

(Address, including zip code, and telephone number, including area code of registrant's principal executive offices)

Charles P. Theuer, M.D., Ph.D.
President and Chief Executive Officer
TRACON Pharmaceuticals, Inc.
8910 University Center Lane, Suite 700
San Diego, California 92122
(858) 550-0780

(Name, address, including zip code, and telephone number, including area code, of agent for service)

*Copies to:*

Patricia Bitar
Chief Financial Officer
TRACON Pharmaceuticals, Inc.
8910 University Center Lane, Suite 700
San Diego, CA 92122
(858) 550-0780

Sean M. Clayton, Esq.
Cooley LLP
4401 Eastgate Mall
San Diego, CA 92121
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**Approximate date of commencement of proposed sale to the public:** As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box. ☒

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

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

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company.

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

**CALCULATION OF REGISTRATION FEE**

| Title of each class of securities to be registered | Amount to be Registered | Proposed Maximum Offering Price per Share | Proposed Maximum Aggregate Offering Price | Amount of Registration Fee |
|---|---|---|---|---|
| Common Stock, par value $0.001 per share | 3,231,515(1) | $4.18(2) | $13,507,733 | $1,566 |

(1) Represents 417,948 shares of common stock currently outstanding and 2,813,567 shares of common stock that are issuable pursuant to a common stock purchase agreement with the selling stockholder named herein. Pursuant to Rule 416(a) of the Securities Act of 1933, as amended, this registration statement also covers any additional shares of common stock which may become issuable to prevent dilution from stock splits, stock dividends and similar events.

(2) Pursuant to Rule 457(c) under the Securities Act of 1933, as amended, calculated on the basis of the average high and low prices per share of the registrant's common stock reported on The NASDAQ Global Market on March 24, 2017.

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

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**The information in this prospectus is not complete and may be changed. The selling stockholder may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities, and the selling stockholder is not soliciting offers to buy these securities, in any state where the offer or sale of these securities is not permitted.**

*PROSPECTUS, SUBJECT TO COMPLETION, DATED MARCH 27, 2017*

# 3,231,515 Shares

## Common Stock

TRACON PHARMA

This prospectus relates to the sale of up to 3,231,515 shares of our common stock by Aspire Capital Fund, LLC. Aspire Capital is also referred to in this prospectus as the selling stockholder. The prices at which the selling stockholder may sell the shares will be determined by the prevailing market price for the shares or in negotiated transactions. We will not receive proceeds from the sale of the shares by the selling stockholder. However, we may receive proceeds of up to $21.0 million from the sale of our common stock to the selling stockholder, pursuant to a common stock purchase agreement entered into with the selling stockholder on March 14, 2017, once the registration statement, of which this prospectus is a part, is declared effective.

The selling stockholder is an "underwriter" within the meaning of the Securities Act of 1933, as amended. We will pay the expenses of registering these shares, but all selling and other expenses incurred by the selling stockholder will be paid by the selling stockholder.

Our common stock is listed on The NASDAQ Global Market under the ticker symbol "TCON." On March 24, 2017, the last reported sale price per share of our common stock was $4.10 per share.

You should read this prospectus and any prospectus supplement, together with additional information described under the headings "Incorporation of Certain Information by Reference" and "Where You Can Find More Information," carefully before you invest in any of our securities.

We are an "emerging growth company" as defined by the Jumpstart Our Business Startups Act of 2012 and, as such, we have elected to comply with certain reduced public company reporting requirements for this prospectus and future filings. Please see "Prospectus Summary – Implications of Being an Emerging Growth Company."

**Investing in our securities involves a high degree of risk. See "Risk Factors" on page 9 of this prospectus.**

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.**

**The date of this prospectus is , 2017**

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We incorporate by reference important information into this prospectus. You may obtain the information incorporated by reference without charge by following the instructions under “Where You Can Find More Information.” You should carefully read this prospectus as well as additional information described under “Incorporation of Certain Information by Reference,” before deciding to invest in our common stock.

Neither we nor the selling stockholder have authorized anyone to provide you with additional information or information different from that contained in this prospectus filed with the Securities and Exchange Commission. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. The selling stockholder is offering to sell, and seeking offers to buy, our common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or any sale of shares of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

For investors outside the United States: Neither we nor the selling stockholder have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this prospectus outside the United States.

## PROSPECTUS SUMMARY

*The following summary highlights information contained or incorporated by reference elsewhere in this prospectus and does not contain all of the information that you should consider in making your investment decision. Before investing in our common stock, you should carefully read this entire prospectus, including our financial statements and the related notes and other documents incorporated by reference in this prospectus, as well as the information under the caption "Risk Factors" herein and under similar headings in the other documents that are incorporated by reference into this prospectus.*

*Except as otherwise indicated herein or as the context otherwise requires, references in this prospectus to "TRACON," "the company," "we," "us" and "our" refer to TRACON Pharmaceuticals, Inc.*

### Company Overview

We are a biopharmaceutical company focused on the development and commercialization of novel targeted therapeutics for cancer, wet age-related macular degeneration, or wet AMD, and fibrotic diseases. We are a leader in the field of endoglin biology and are using our expertise to develop antibodies that bind to the endoglin receptor. Endoglin is essential to angiogenesis, the process of new blood vessel formation required for solid cancer growth and for wet AMD, and a key contributor to the development of fibrosis, or tissue scarring. We are developing our lead product candidate, TRC105 (INN 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 eight completed Phase 2 clinical trials and three completed Phase 1 clinical trials, and is currently being dosed in one Phase 3 clinical trial, four 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 two indications, angiosarcoma and gestational trophoblastic neoplasia, or GTN, both of which are tumors that highly express endoglin, the target of TRC105, and therefore may be more responsive to treatment with TRC105. We have seen complete ongoing responses in these tumor types and have initiated dosing in an international multicenter Phase 3 trial in angiosarcoma and an international multicenter Phase 2 trial in GTN. 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 ongoing Phase 2 trials in renal cell carcinoma, which is a randomized trial expected to produce top-line data in the second half of 2017, and hepatocellular carcinoma, that is expected to produce top-line data in the first half of 2018. 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 an ongoing Phase 1 trial in lung cancer and a Phase 1/2 trial in breast cancer. Positive data in these larger indications would enable further development.

We have produced a formulation of TRC105 for development in ophthalmology, 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. We retain global rights to develop our endoglin antibodies outside of the field of ophthalmology. In June 2015, Santen filed an Investigational New Drug, or IND, application with the FDA for the initiation of clinical studies for DE-122, the ophthalmic formulation of TRC105, in patients with wet AMD. The Phase 1/2 PAVE trial is recruiting patients with wet AMD, including patients receiving a VEGF inhibitor, and top-line data are expected in the second half of 2017. We also expect Santen to initiate the Phase 2 AVANTE trial in wet AMD in 2017.

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

In addition, a patient with cutaneous neurofibromatosis treated with TRC105 and a VEGF inhibitor in an oncology trial demonstrated reduction in the cutaneous lesions that characterize the disease. We may study TRC105 in additional patients with cutaneous neurofibromatosis.

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 glioblastoma and with Alimta (pemetrexed) in mesothelioma, in addition to three 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 a novel small molecule high affinity competitive inhibitor of wild type androgen receptor (AR) and multiple AR mutant receptors which display drug resistance to currently approved treatments, and is intended for the treatment of men with prostate cancer. We filed an IND in December 2016, which was cleared by the FDA in January 2017, and expect to initiate first in human testing for TRC253 in a Phase 1/2 clinical study in the first half of 2017. 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 to the program, 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.

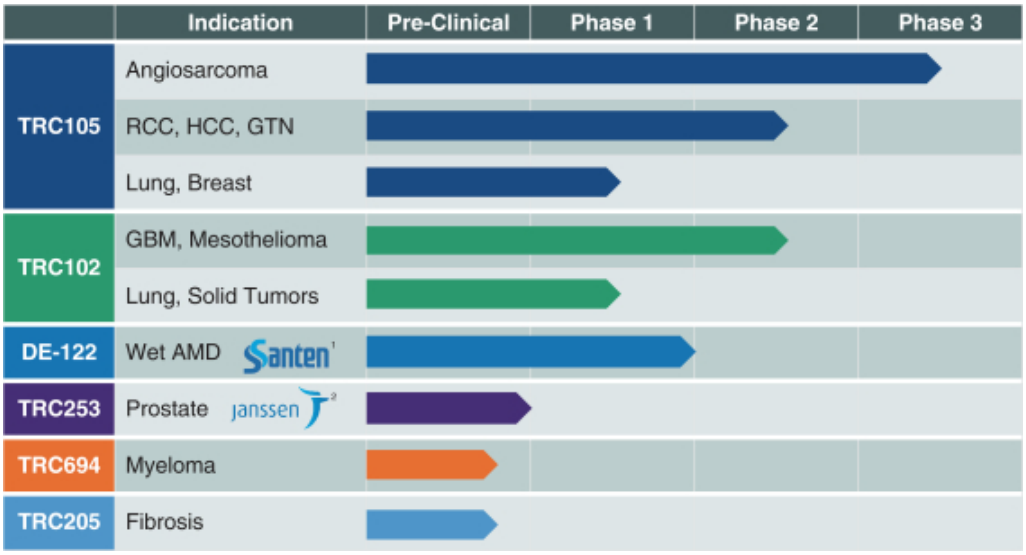
TRC694 is a novel, potent, orally bioavailable inhibitor of NF-kB inducing kinase (NIK), which is intended for the treatment of patients with hematologic malignancies, including myeloma. We plan to conduct preclinical activities, including formulation development and companion diagnostic development, and expect to file an IND for TRC694 in 2018.

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 begun to leverage this capital efficient model in our recently initiated 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 has selected TRC105 and TRC102 for federal funding of clinical development, as well as Case Western Cancer Center (Case Western) and certain other academic institutions. Under these collaborations, NCI has sponsored or is sponsoring nine completed or ongoing clinical trials of TRC105 and TRC102, and Case Western has sponsored or is sponsoring three clinical trials of TRC102. We anticipate that NCI will complete ongoing Phase 1 and Phase 2 clinical trials of TRC105 and TRC102 and may initiate other clinical trials. If merited by Phase 2 data, we expect to fund additional Phase 3 clinical trials of TRC105 in certain indications beyond angiosarcoma and initial Phase 3 clinical trials of 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.

The following chart summarizes our pipeline of product candidates:




1 Partnered with Santen Pharmaceutical Co., Ltd. (Santen)
2 Janssen Pharmaceutica N.V. (Janssen) retains a buyback option

The following table summarizes key information regarding ongoing and planned development of our product candidates:

| | Phase | Data Expected |
|---|---|---|
| **TRC105** | | |
| Ongoing trials: | | |
| Angiosarcoma | Phase 3 | Interim analysis first half 2018 |
| Renal Cell Carcinoma | Randomized Phase 2 | Second half 2017 |
| Soft Tissue Sarcoma | Phase 2 | Second half 2017 |
| Gestational Trophoblastic Neoplasia (GTN) | Phase 2 | Interim data second half 2017 |
| Hepatocellular Carcinoma | Phase 1/2 | 2018 |
| Hepatocellular Carcinoma (NCI Sponsored) | Phase 1/2 | 2017 |
| Lung Cancer | Phase 1 | 2017 |
| Breast Cancer | Phase 1/2 | 2017 |
| Wet AMD (Santen) (DE-122) | Phase 1/2 | 2017 |
| **TRC102** | | |
| Ongoing trials: | | |
| Mesothelioma | Phase 2 | 2018 |
| Glioblastoma | Phase 2 | 2018 |
| Solid tumors | Phase 1 | 2017 |
| Solid tumors (Oral) and Lymphomas | Phase 1 | 2018 |
| Lung Cancer | Phase 1 | 2018 |
| **TRC253** | | |
| Planned trials: | | |
| Prostate Cancer | Phase 1/2 | 2018 |

**Corporate Information**

We were incorporated in the state of Delaware in October 2004 as Lexington Pharmaceuticals, Inc. and we subsequently changed our name to TRACON Pharmaceuticals, Inc. in March 2005, at which time we relocated to San Diego, California. Our principal executive offices are located at 8910 University Center Lane, Suite 700, San Diego, 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. The information contained on, or that can be accessed through, our website is not a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

The trademarks, trade names and service marks appearing in this prospectus are the property of their respective owners. We do not intend our use or display of other companies' trademarks, trade names or service marks to imply a relationship with, or endorsement or sponsorship of us by, any other companies or products.

**Implications of Being an Emerging Growth Company**

As a company with less than $1.0 billion in revenue during our last fiscal year, we qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. For so long as we remain an emerging growth company, we are permitted and intend to rely on exemptions from specified disclosure requirements that are applicable to other public companies that are not emerging growth companies. These exemptions include:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure;
- not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting;
- not being required to comply 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;
- reduced disclosure obligations regarding executive compensation; and
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved.

We may take advantage of these provisions through 2020 or such earlier time that we are no longer an emerging growth company. We would cease to be an emerging growth company if we have more than $1.0 billion in annual revenues, have more than $700 million in market value of our capital stock held by non-affiliates or issue more than $1.0 billion of non-convertible debt over a three-year period. We may choose to take advantage of some, but not all, of the available exemptions. We have taken advantage of some reduced reporting burdens in this prospectus and the documents incorporated by reference into this prospectus. Accordingly, the information contained herein may be different than the information you receive from other public companies in which you hold stock.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This provision allows an emerging growth company to delay the adoption of some accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this exemption from new or revised accounting standards and, therefore, we will be subject to the same new or revised accounting standards as other public companies that are not emerging growth companies.

**The Offering**

| | |
|---|---|
| **Common stock being offered by the selling stockholder** | 3,231,515 shares |
| **Common stock outstanding** | 16,165,659 shares (as of March 14, 2017, excluding the Initial Purchase Shares and the Commitment Shares, as defined below) |
| **Use of proceeds** | The selling stockholder will receive all of the proceeds from the sale of the shares offered for sale by it under this prospectus. We will not receive proceeds from the sale of the shares by the selling stockholder. However, we may receive up to $21.0 million in proceeds from the sale of our common stock to the selling stockholder under the common stock purchase agreement described below. Proceeds that we receive under the common stock purchase agreement will be used to advance our research and development activities and for working capital and general corporate purposes. |
| **NASDAQ Global Market Symbol** | TCON |
| **Risk Factors** | Investing in our securities involves a high degree of risk. You should carefully review and consider the "Risk Factors" section of this prospectus beginning on page 9 for a discussion of factors to consider before deciding to invest in shares of our common stock. |

The number of shares of our common stock outstanding is based on an aggregate of 16,165,659 shares outstanding as of March 14, 2017 and excludes the 222,222 Initial Purchase Shares and 195,726 Commitment Shares as defined below, and also excludes:

- 2,266,831 shares of common stock issuable upon the exercise of options outstanding as of March 14, 2017 at a weighted average exercise price of $7.90 per share;
- 241,902 shares of common stock issuable upon the vesting of restricted stock units outstanding as of March 14, 2017;
- 826,948 shares of common stock reserved for future issuance under the 2015 Equity Incentive Plan as of March 14, 2017;
- 422,687 shares of common stock reserved for future issuance under the 2015 Employee Stock Purchase Plan as of March 14, 2017; and
- 103,865 shares of common stock issuable upon the exercise of warrants outstanding as of March 14, 2017 at a weighted average exercise price of $7.12 per share.

On March 14, 2017, we entered into a common stock purchase agreement, or the Purchase Agreement, with Aspire Capital Fund, LLC, an Illinois limited liability company, or Aspire Capital, or the selling stockholder, which provides that, upon the terms and subject to the conditions and limitations set forth therein, Aspire Capital is committed to purchase up to an aggregate of $21.0 million of shares of our common stock over the 30-month term of the Purchase Agreement. In consideration for entering into the Purchase Agreement, concurrently with the execution of the Purchase Agreement, we issued to Aspire Capital 195,726 shares of our common stock, or the Commitment Shares, as a commitment fee and sold to Aspire Capital 222,222 shares of common stock, or the Initial Purchase Shares, at $4.50 per share for proceeds of $1.0 million. Concurrently with entering into the Purchase Agreement, we also entered into a registration rights agreement with Aspire Capital, or the Registration Rights Agreement, in which we agreed to file one or more registration statements, including the registration

statement of which this prospectus is a part, as permissible and necessary to register under the Securities Act of 1933, as amended, or the Securities Act, the sale of the shares of our common stock that have been and may be issued to Aspire Capital under the Purchase Agreement.

As of March 14, 2017, there were 16,165,659 shares of our common stock outstanding, excluding the 3,231,515 shares offered that have been issued or may be issuable to Aspire Capital pursuant to the Purchase Agreement. If all of such 3,231,515 shares of our common stock offered hereby were issued and outstanding as of the date hereof, such shares would represent 19.9% of the total common stock outstanding as of the date hereof. The number of shares of our common stock ultimately offered for sale by Aspire Capital is dependent upon the number of shares purchased by Aspire Capital under the Purchase Agreement.

The aggregate number of shares that we may issue to Aspire Capital under the Purchase Agreement, including the Commitment Shares, may in no case exceed 3,231,515 shares of our common stock (which is equal to 19.99% of the common stock outstanding on the date of the Purchase Agreement) unless (i) shareholder approval is obtained to issue more, in which case this 3,231,515 share limitation will not apply, or (ii) shareholder approval has not been obtained and at any time the 3,231,515 share limitation is reached and at all times thereafter the average price paid for all shares issued under the Purchase Agreement (including the Commitment Shares) is equal to or greater than $4.15, referred to as the Minimum Price, a price equal to the closing sale price of our common stock on the business day prior to the date of the Purchase Agreement; provided that at no one point in time shall Aspire Capital (together with its affiliates) beneficially own more than 19.99% of our common stock.

Pursuant to the Purchase Agreement and the Registration Rights Agreement, we are registering 3,231,515 shares of our common stock under the Securities Act, which includes the Commitment Shares and the Initial Purchase Shares that have already been issued to Aspire Capital, and 2,813,567 shares of common stock that we may issue to Aspire Capital after this registration statement is declared effective under the Securities Act. All 3,231,515 shares of common stock are being offered pursuant to this prospectus. If we elect to sell more than the 3,231,515 shares of common stock offered hereby, we must first register under the Securities Act the sale by Aspire Capital of such additional shares.

After the Securities and Exchange Commission has declared effective the registration statement of which this prospectus is a part, on any trading day on which the closing sale price of our common stock exceeds $0.50, we have the right, in our sole discretion, to present Aspire Capital with a purchase notice (each, a Purchase Notice), directing Aspire Capital (as principal) to purchase up to 75,000 shares of our common stock per trading day, up to $21.0 million of our common stock in the aggregate at a per share price, or the Purchase Price, calculated by reference to the prevailing market price of our common stock (as more specifically described below in the section titled “The Aspire Capital Transaction”).

In addition, on any date on which we submit a Purchase Notice for 75,000 shares to Aspire Capital, we also have the right, in our sole discretion, to present Aspire Capital with a volume-weighted average price purchase notice (each, a VWAP Purchase Notice) directing Aspire Capital to purchase an amount of stock equal to up to 30% of the aggregate shares of the Company’s common stock traded on The NASDAQ Global Market on the next trading day, or VWAP Purchase Date, subject to a maximum number of shares we may determine, or VWAP Purchase Share Volume Maximum, and a minimum trading price, or VWAP Minimum Price Threshold (as more specifically described below). The purchase price per Purchase Share pursuant to such VWAP Purchase Notice, or the VWAP Purchase Price, is calculated by reference to the prevailing market price of our common stock (as more specifically described below in the section titled “The Aspire Capital Transaction”).

The Purchase Agreement provides that the Company and Aspire Capital shall not effect any sales under the Purchase Agreement on any purchase date where the closing sale price of our common stock is less than $0.50

per share, or the Floor Price. This Floor Price and the respective prices and share numbers in the preceding paragraphs will be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction. There are no trading volume requirements or restrictions under the Purchase Agreement, and we will control the timing and amount of any sales of our common stock to Aspire Capital. Aspire Capital has no right to require any sales by us, but is obligated to make purchases from us as we direct in accordance with the Purchase Agreement. There are no limitations on use of proceeds, financial or business covenants, restrictions on future fundings, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement. Aspire Capital may not assign its rights or obligations under the Purchase Agreement. The Purchase Agreement may be terminated by us at any time, at our discretion, without any penalty or cost to us.

## RISK FACTORS

*Investing in our common stock involves a high degree of risk. You should consider carefully the following risks and uncertainties as well as the risks and uncertainties described in the section entitled "Risk Factors" contained in our Annual Report on Form 10-K for the year ended December 31, 2016, as filed with the Securities and Exchange Commission, or SEC, on March 1, 2017, as well as in our subsequent Quarterly and Annual Reports filed with the SEC, which descriptions are incorporated in this prospectus by reference in their entirety, as well as in any prospectus supplement hereto. These risks and uncertainties are not the only risks and uncertainties we face. Additional risks and uncertainties not currently known to us, or that we currently view as immaterial, may also impair our business. If any of the risks or uncertainties described in our SEC filings or any additional risks and uncertainties actually occur, our business, financial condition, results of operations and cash flow could be materially and adversely affected. In that case, the trading price of our common stock could decline and you might lose all or part of your investment. You should carefully consider the following information about risks, together with the other information contained in this prospectus, before making an investment in our common stock.*

***We will need to raise substantial additional capital in the future to fund our operations and we may be unable to raise such funds when needed and on acceptable terms.***

We will need to raise substantial additional capital in the future to fund our operations. The extent to which we utilize the Purchase Agreement with Aspire Capital as a source of funding will depend on a number of factors, including the prevailing market price of our common stock, the volume of trading in our common stock and the extent to which we are able to secure funds from other sources. The number of shares that we may sell to Aspire Capital under the Purchase Agreement on any given day and during the term of the Purchase Agreement is limited. See "The Aspire Capital Transaction" for additional information. Additionally, we and Aspire Capital may not effect any sales of shares of our common stock under the Purchase Agreement during the continuance of an event of default or on any trading day that the closing sale price of our common stock is less than $0.50 per share. Even if we are able to access the full $21.0 million under the Purchase Agreement, we will still need additional capital to fully implement our business, operating and development plans.

***The sale of our common stock to Aspire Capital may cause substantial dilution to our existing stockholders and the sale of the shares of common stock acquired by Aspire Capital could cause the price of our common stock to decline.***

We are registering for sale the Commitment Shares and Initial Purchase Shares that we have issued and 2,813,567 additional shares that we may sell to Aspire Capital from time to time under the Purchase Agreement. It is anticipated that shares registered in this offering will be sold over a period of up to approximately 30 months from the date of this prospectus. The number of shares ultimately offered for sale by Aspire Capital under this prospectus is dependent upon the number of shares we elect to sell to Aspire Capital under the Purchase Agreement. Depending on a variety of factors, including market liquidity of our common stock, the sale of shares under the Purchase Agreement may cause the trading price of our common stock to decline.

Aspire Capital may ultimately purchase all, some or none of the $21.0 million of common stock that, together with the Commitment Shares and Initial Purchase Shares, is the subject of this prospectus. Aspire Capital may sell all, some or none of our shares that it holds or comes to hold under the Purchase Agreement. Sales by us to Aspire Capital of shares pursuant to the Purchase Agreement may result in dilution to the interests of other holders of our common stock. The sale of a substantial number of shares of our common stock by Aspire Capital in this offering, or anticipation of such sales, could cause the trading price of our common stock to decline or make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise desire.

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference herein contain forward-looking statements that reflect our management's beliefs and views with respect to future events and are subject to substantial risks and uncertainties within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended. All statements, other than statements of historical fact, contained in this prospectus and the documents incorporated by reference herein, including statements regarding our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans and objectives of management, are forward-looking statements. Forward-looking statements can be identified by the use of forward-looking words such as "believes," "expects," "may," "will," "plans," "intends," "estimates," "could," "should," "would," "continue," "seeks," "aims," "projects," "predicts," "pro forma," "anticipates," "potential" or other similar words (including their use in the negative), or by discussions of future matters such as the development of product candidates or products, technology enhancements, possible changes in legislation, and other statements that are not historical.

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

- the success, cost, design 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, including our strategic licensing collaboration with Janssen, and our ability to enter into additional collaboration arrangements;
- our regulatory strategy and potential benefits associated therewith;
- the timing of, and our ability to obtain and maintain, regulatory approvals for our product candidates;
- the rate and degree of market acceptance and clinical utility of any approved product candidate;
- the 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;
- the anticipated benefits associated with our capital efficient clinical development model;
- our ability to sell shares of common stock to Aspire Capital pursuant to the terms of the Purchase Agreement and our ability to register and maintain the registration of the shares issued and issuable thereunder; and
- our anticipated use of the net proceeds from the potential sale of shares of our common stock to Aspire Capital.

We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements. We operate in a very competitive and rapidly changing environment. 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. Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make, and accordingly you should not place undue reliance on our forward-looking statements. We have included important factors in the cautionary statements included in this prospectus, particularly in the "Risk Factors" section in this prospectus and

the documents incorporated by reference herein, that we believe could cause actual results or events to differ materially from the forward-looking statements that we make. Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we may make.

You should read this prospectus, the documents incorporated by reference herein and the documents that we have filed as exhibits to the registration statement of which this prospectus is a part completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of the forward-looking statements in this prospectus and the documents incorporated by reference herein 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.

## THE ASPIRE CAPITAL TRANSACTION

### General

On March 14, 2017, we entered into the Purchase Agreement, which provides that, upon the terms and subject to the conditions and limitations set forth therein, Aspire Capital is committed to purchase up to an aggregate of $21.0 million of our shares of common stock over the term of the Purchase Agreement. In consideration for entering into the Purchase Agreement, concurrently with the execution of the Purchase Agreement, we issued to Aspire Capital the 195,726 Commitment Shares. Upon execution of the Purchase Agreement, we also sold to Aspire Capital the 222,222 Initial Purchase Shares for proceeds of $1.0 million. Concurrently with entering into the Purchase Agreement, we also entered into the Registration Rights Agreement, in which we agreed to file one or more registration statements as permissible and necessary to register under the Securities Act, the sale of the shares of our common stock that have been and may be issued to Aspire Capital under the Purchase Agreement.

As of March 14, 2017, there were 16,165,659 shares of our common stock outstanding, excluding the 3,231,515 shares offered that have been issued or may be issuable to Aspire Capital pursuant to the Purchase Agreement. If all of such 3,231,515 shares of our common stock offered hereby were issued and outstanding as of the date hereof, such shares would represent 19.9% of the total common stock outstanding. The number of shares of our common stock ultimately offered for sale by Aspire Capital is dependent upon the number of shares purchased by Aspire Capital under the Purchase Agreement.

The aggregate number of shares that we may issue to Aspire Capital under the Purchase Agreement, including the Commitment Shares, may in no case exceed 3,231,515 shares of our common stock (which is equal to 19.99% of the common stock outstanding on the date of the Purchase Agreement) unless (i) shareholder approval is obtained to issue more, in which case this 3,231,515 share limitation will not apply, or (ii) shareholder approval has not been obtained and at any time the 3,231,515 share limitation is reached and at all times thereafter the average price paid for all shares issued under the Purchase Agreement (including the Commitment Shares) is equal to or greater than $4.15, referred to as the Minimum Price, a price equal to the closing sale price of our common stock on the business day prior to the date of the Purchase Agreement; provided that at no one point in time shall Aspire Capital (together with its affiliates) beneficially own more than 19.99% of our common stock.

Pursuant to the Purchase Agreement and the Registration Rights Agreement, we are registering 3,231,515 shares of our common stock under the Securities Act, which includes the Commitment Shares and Initial Purchase Shares that have already been issued to Aspire Capital and 2,813,567 shares of common stock which we may issue to Aspire Capital after this registration statement is declared effective under the Securities Act. All 3,231,515 shares of common stock are being offered pursuant to this prospectus. Under the Purchase Agreement, we have the right but not the obligation to issue more than the 3,231,515 shares of common stock included in this prospectus to Aspire Capital under some circumstances. If we elect to sell more than the 3,231,515 shares of common stock offered hereby, we must first register under the Securities Act the sale by Aspire Capital of any such additional shares.

After the Securities and Exchange Commission has declared effective the registration statement of which this prospectus is a part, on any trading day on which the closing sale price of our common stock is not less than $0.50 per share, we have the right, in our sole discretion, to present Aspire Capital with a Purchase Notice, directing Aspire Capital (as principal) to purchase up to 75,000 shares of our common stock per business day, up to $21.0 million of our common stock in the aggregate over the term of the Purchase Agreement, at a Purchase Price calculated by reference to the prevailing market price of our common stock over the preceding 10-business day period (as more specifically described below); however, no sale pursuant to a Purchase Notice may exceed $500,000 per trading day.

In addition, on any date on which we submit a Purchase Notice to Aspire Capital for 75,000 Purchase Shares, we also have the right, in our sole discretion, to present Aspire Capital with a VWAP Purchase Notice

directing Aspire Capital to purchase an amount of stock equal to up to 30% of the aggregate shares of our common stock traded on the NASDAQ Global Market on the next trading day, subject to the VWAP Purchase Share Volume Maximum and the VWAP Minimum Price Threshold. The VWAP Purchase Price is calculated by reference to the prevailing market price of our common stock (as more specifically described below).

The Purchase Agreement provides that we and Aspire Capital shall not effect any sales under the Purchase Agreement on any purchase date where the closing sale price of our common stock is less than the Floor Price. There are no trading volume requirements or restrictions under the Purchase Agreement, and we will control the timing and amount of any sales of our common stock to Aspire Capital. Aspire Capital has no right to require any sales by us, but is obligated to make purchases from us as we direct in accordance with the Purchase Agreement. There are no limitations on use of proceeds, financial or business covenants, restrictions on future financings, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement.

Aspire Capital may not assign its rights or obligations under the Purchase Agreement. The Purchase Agreement may be terminated by us at any time, at our discretion, without any penalty or cost to us.

**Purchase of Shares under the Purchase Agreement**

Under the Purchase Agreement, on any trading day selected by us on which the closing sale price of our common stock exceeds $0.50 per share, we may direct Aspire Capital to purchase up to 75,000 shares of our common stock per trading day. The Purchase Price of such shares is equal to the lesser of:

- the lowest sale price of our common stock on the purchase date; or
- the average of the three lowest closing sale prices for our common stock during the ten consecutive trading days ending on the trading day immediately preceding the purchase date.

In addition, on any date on which we submit a Purchase Notice to Aspire Capital for the purchase of up to 75,000 shares, we also have the right to direct Aspire Capital to purchase an amount of stock equal to up to 30% of the aggregate shares of the our common stock traded on the NASDAQ Global Market on the next trading day, subject to the VWAP Purchase Share Volume Maximum and the VWAP Minimum Price Threshold, which is equal to the greater of (a) 80% of the closing price of the Company's common stock on the business day immediately preceding the VWAP Purchase Date or (b) such higher price as set forth by the Company in the VWAP Purchase Notice. The VWAP Purchase Price of such shares is the lower of:

- the closing sale price on the VWAP Purchase Date; or
- 97% of the volume-weighted average price for our common stock traded on the NASDAQ Global Market:
    - on the VWAP Purchase Date, if the aggregate shares to be purchased on that date have not exceeded the VWAP Purchase Share Volume Maximum or
    - during that portion of the VWAP Purchase Date until such time as the sooner to occur of (i) the time at which the aggregate shares traded on the NASDAQ Global Market exceed the VWAP Purchase Share Volume Maximum or (ii) the time at which the sale price of the Company's common stock falls below the VWAP Minimum Price Threshold.

The Purchase Price will be adjusted for any reorganization, recapitalization, non-cash dividend, stock split, or other similar transaction occurring during the trading day(s) used to compute the Purchase Price. We may deliver multiple Purchase Notices and VWAP Purchase Notices to Aspire Capital from time to time during the term of the Purchase Agreement, so long as the most recent purchase has been completed.

**Minimum Share Price**

Under the Purchase Agreement, we and Aspire Capital may not effect any sales of shares of our common stock under the Purchase Agreement on any trading day that the closing sale price of our common stock is less than $0.50 per share.

**Events of Default**

Generally, Aspire Capital may terminate the Purchase Agreement upon the occurrence of any of the following, among other, events of default:

- the effectiveness of any registration statement that is required to be maintained effective pursuant to the terms of the Registration Rights Agreement between us and Aspire Capital lapses for any reason (including, without limitation, the issuance of a stop order) or is unavailable to Aspire Capital for sale of our shares of common stock, and such lapse or unavailability continues for a period of ten consecutive business days or for more than an aggregate of 30 business days in any 365-day period, which is not in connection with a post-effective amendment to any such registration statement; in connection with any post-effective amendment to such registration statement that is required to be declared effective by the SEC such lapse or unavailability may continue for a period of no more than 40 consecutive business days;
- the suspension from trading or failure of our common stock to be listed on our principal market for a period of three consecutive business days;
- the delisting of our common stock from our principal market, provided our common stock is not immediately thereafter trading on the New York Stock Exchange, the NYSE MKT, the Nasdaq Capital Market, the Nasdaq Global Select Market, the Nasdaq Global Market, the OTB Bulletin Board or the OTCQB marketplace or OTCQX marketplace of the OTC Markets Group;
- our transfer agent's failure to issue to Aspire Capital shares of our common stock which Aspire Capital is entitled to receive under the Purchase Agreement within five business days after an applicable purchase date;
- any breach by us of the representations or warranties or covenants contained in the Purchase Agreement or any related agreements which could have a material adverse effect on us, subject to a cure period of five business days;
- if we become insolvent or are generally unable to pay our debts as they become due; or
- any participation or threatened participation in insolvency or bankruptcy proceedings by or against us.

**Our Termination Rights**

The Purchase Agreement may be terminated by us at any time, at our discretion, without any penalty or cost to us.

**No Short-Selling or Hedging by Aspire Capital**

Aspire Capital has agreed that neither it nor any of its agents, representatives and affiliates shall engage in any direct or indirect short-selling or hedging of our common stock during any time prior to the termination of the Purchase Agreement.

**Effect of Performance of the Purchase Agreement on Our Stockholders**

The Purchase Agreement does not limit the ability of Aspire Capital to sell any or all of the 3,231,515 shares registered in this offering. It is anticipated that shares registered in this offering will be sold over a period of up to

approximately 30 months from the date of this prospectus. The sale by Aspire Capital of a significant amount of shares registered in this offering at any given time could cause the market price of our common stock to decline and/or to be highly volatile. Aspire Capital may ultimately purchase all, some or none of the 2,813,567 shares of common stock not yet issued but registered in this offering. After it has acquired such shares, it may sell all, some or none of such shares. Therefore, sales to Aspire Capital by us pursuant to the Purchase Agreement also may result in substantial dilution to the interests of other holders of our common stock. However, we have the right to control the timing and amount of any sales of our shares to Aspire Capital and the Purchase Agreement may be terminated by us at any time at our discretion without any penalty or cost to us.

**Percentage of Outstanding Shares after Giving Effect to the Purchased Shares Issued to Aspire Capital**

In connection with entering into the Purchase Agreement, we authorized the sale to Aspire Capital of up to $21.0 million of our shares of common stock. However, we estimate that we will sell no more than 3,231,515 shares to Aspire Capital under the Purchase Agreement (including the Commitment Shares and Initial Purchase Shares), all of which are included in this offering. Subject to any required approval by our board of directors, we have the right but not the obligation to issue more than the 3,231,515 shares included in this prospectus to Aspire Capital under the Purchase Agreement under some circumstances. In the event we elect to issue more than 3,231,515 shares under the Purchase Agreement, we will be required to file a new registration statement and have it declared effective by the SEC. The number of shares ultimately offered for sale by Aspire Capital in this offering is dependent upon the number of shares purchased by Aspire Capital under the Purchase Agreement. The following table sets forth the number and percentage of outstanding shares to be held by Aspire Capital after giving effect to the sale of shares of common stock sold to Aspire Capital at varying purchase prices:

| Assumed Average Purchase Price | Proceeds from the Sale of Shares to Aspire Capital Under the Purchase Agreement Registered in this Offering | Number of Shares to be Issued in this Offering at the Assumed Average Purchase Price (1) | Total Number of Outstanding Shares After Giving Effect to the Shares Issued to Aspire Capital (2) | Percentage of Outstanding Shares After Giving Effect to the Purchased Shares Issued to Aspire Capital (3) |
|---|---|---|---|---|
| $ 0.50 | $ 1,517,895 | 3,035,789 | 19,397,174 | 16.7% |
| $ 1.00 | $ 3,035,789 | 3,035,789 | 19,397,174 | 16.7% |
| $ 2.00 | $ 6,071,578 | 3,035,789 | 19,397,174 | 16.7% |
| $ 3.00 | $ 9,107,367 | 3,035,789 | 19,397,174 | 16.7% |
| $ 4.00 | $ 12,143,156 | 3,035,789 | 19,397,174 | 16.7% |
| $ 5.00 | $ 15,178,945 | 3,035,789 | 19,397,174 | 16.7% |
| $ 6.00 | $ 18,214,734 | 3,035,789 | 19,397,174 | 16.7% |
| $ 7.00 | $ 21,000,000 | 3,000,000 | 19,361,385 | 16.5% |

(1) Excludes the 195,726 Commitment Shares issued under the Purchase Agreement between us and Aspire Capital, but includes the 222,222 Initial Purchase Shares.

(2) Based on an assumed number of shares outstanding as of March 14, 2017, which includes the 16,165,659 shares of common stock outstanding immediately prior to the execution of the Purchase Agreement, 195,726 Commitment Shares previously issued to Aspire Capital and the number of shares set forth in the adjacent column (including the Initial Purchase Shares) that we would have sold to Aspire Capital.

(3) The numerator includes the 195,726 Commitment Shares plus the number of shares set forth in the column titled, “Number of Shares to be Issued in this Offering at the Assumed Average Purchase Price.” The denominator is set forth in the adjacent column.

## USE OF PROCEEDS

This prospectus relates to shares of our common stock that may be offered and sold from time to time by Aspire Capital. We will not receive any proceeds upon the sale of shares by Aspire Capital. However, we have received proceeds of $1.0 million, and may receive additional proceeds of up to $20.0 million, for an aggregate of $21.0 million gross proceeds, from the sale of shares under the Purchase Agreement to Aspire Capital. The proceeds will be used for the advancement of our research and development activities, working capital and general corporate purposes. This anticipated use of net proceeds from the sale of our common stock to Aspire Capital under the Purchase Agreement represents our intentions based upon our current plans and business conditions.

## SELLING STOCKHOLDER

The selling stockholder may from time to time offer and sell any or all of the shares of our common stock set forth below pursuant to this prospectus. When we refer to the "selling stockholder" in this prospectus, we mean the entity listed in the table below, and its respective pledgees, donees, permitted transferees, assignees, successors and others who later come to hold any of the selling stockholder's interests in shares of our common stock other than through a public sale.

The following table sets forth, as of the date of this prospectus, the name of the selling stockholder for whom we are registering shares for sale to the public, the number of shares of common stock beneficially owned by the selling stockholder prior to this offering, the total number of shares of common stock that the selling stockholder may offer pursuant to this prospectus and the number of shares of common stock that the selling stockholder will beneficially own after this offering. Except as noted below, the selling stockholder does not have, or within the past three years has not had, any material relationship with us or any of our predecessors or affiliates and the selling stockholder is not or was not affiliated with registered broker-dealers.

Based on the information provided to us by the selling stockholder, assuming that the selling stockholder sells all of the shares of our common stock beneficially owned by it that have been registered by us and does not acquire any additional shares during the offering, the selling stockholder will not own any shares, as reflected in the column entitled "Beneficial Ownership After This Offering." We cannot advise you as to whether the selling stockholder will in fact sell any or all of such shares of common stock. In addition, the selling stockholder may have sold, transferred or otherwise disposed of, or may sell, transfer or otherwise dispose of, at any time and from time to time, the shares of our common stock in transactions exempt from the registration requirements of the Securities Act after the date on which it provided the information set forth in the table below.

| Name | Shares of Common Stock Owned Prior to this Offering | Additional Shares of Common Stock Being Offered | Beneficial Ownership After this Offering (1) | |
|---|---|---|---|---|
| | | | Number of Shares | % |
| Aspire Capital Fund, LLC (2) | 474,268 (3) | 2,813,567 | 56,320 | * |

* Less than 1%.

(1) Assumes the sale of all shares of common stock registered pursuant to this prospectus, although the selling stockholder is under no obligation known to us to sell any shares of common stock at this time.

(2) Aspire Capital Partners LLC ("Aspire Partners") is the Managing Member of Aspire Capital Fund LLC ("Aspire Fund"). SGM Holdings Corp ("SGM") is the Managing Member of Aspire Partners. Mr. Steven G. Martin ("Mr. Martin") is the president and sole shareholder of SGM, as well as a principal of Aspire Partners. Mr. Erik J. Brown ("Mr. Brown") is the president and sole shareholder of Red Cedar Capital Corp ("Red Cedar"), which is a principal of Aspire Partners. Mr. Christos Komissopoulos ("Mr. Komissopoulos") is president and sole shareholder of Chrisko Investors Inc. ("Chrisko"), which is a principal of Aspire Partners. Each of Aspire Partners, SGM, Red Cedar, Chrisko, Mr. Martin, Mr. Brown, and

Mr. Komissopoulos may be deemed to be a beneficial owner of common stock held by Aspire Fund. Each of Aspire Partners, SGM, Red Cedar, Chrisko, Mr. Martin, Mr. Brown, and Mr. Komissopoulos disclaims beneficial ownership of the common stock held by Aspire Fund.

(3) As of the date hereof, 417,948 shares of our common stock have been acquired by Aspire Capital under the Purchase Agreement, consisting of the 195,726 Commitment Shares we issued to Aspire Capital as a commitment fee and the 222,222 Initial Purchase Shares sold to Aspire Capital. We may elect in our sole discretion to sell to Aspire Capital up to an additional 2,813,567 shares under the Purchase Agreement but Aspire Capital does not presently beneficially own those shares as determined in accordance with the rules of the SEC.

## PLAN OF DISTRIBUTION

The common stock offered by this prospectus is being offered by Aspire Capital, the selling stockholder. The common stock may be sold or distributed from time to time by the selling stockholder directly to one or more purchasers or through brokers, dealers, or underwriters who may act solely as agents at market prices prevailing at the time of sale, at prices related to the prevailing market prices, at negotiated prices, or at fixed prices, which may be changed. The sale of the common stock offered by this prospectus may be effected in one or more of the following methods:

- ordinary brokers' transactions;
- transactions involving cross or block trades;
- through brokers, dealers, or underwriters who may act solely as agents;
- "at the market" into an existing market for the common stock;
- in other ways not involving market makers or established business markets, including direct sales to purchasers or sales effected through agents;
- in privately negotiated transactions; or
- any combination of the foregoing.

In order to comply with the securities laws of certain states, if applicable, the shares may be sold only through registered or licensed brokers or dealers. In addition, in certain states, the shares may not be sold unless they have been registered or qualified for sale in the state or an exemption from the registration or qualification requirement is available and complied with.

The selling stockholder may also sell shares of common stock under Rule 144 promulgated under the Securities Act, if available, rather than under this prospectus. In addition, the selling stockholder may transfer the shares of common stock by other means not described in this prospectus.

Brokers, dealers, underwriters, or agents participating in the distribution of the shares as agents may receive compensation in the form of commissions, discounts, or concessions from the selling stockholder and/or purchasers of the common stock for whom the broker-dealers may act as agent. Aspire Capital has informed us that each such broker-dealer will receive commissions from Aspire Capital which will not exceed customary brokerage commissions.

Aspire Capital is an "underwriter" within the meaning of the Securities Act.

Neither we nor Aspire Capital can presently estimate the amount of compensation that any agent will receive. We know of no existing arrangements between Aspire Capital, any other stockholder, broker, dealer, underwriter, or agent relating to the sale or distribution of the shares offered by this prospectus. At the time a particular offer of shares is made, a prospectus supplement, if required, will be distributed that will set forth the names of any agents, underwriters, or dealers and any compensation from the selling stockholder, and any other required information.

We will pay all of the expenses incident to the registration, offering, and sale of the shares by Aspire Capital to the public other than commissions or discounts of underwriters, broker-dealers, or agents. We have agreed to indemnify Aspire Capital and certain other persons against certain liabilities in connection with the offering of shares of common stock offered hereby, including liabilities arising under the Securities Act or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities. Aspire Capital has agreed to indemnify us against liabilities under the Securities Act that may arise from certain written information furnished to us by Aspire Capital specifically for use in this prospectus or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities.

Aspire Capital and its affiliates have agreed not to engage in any direct or indirect short selling or hedging of our common stock during the term of the Purchase Agreement.

We have advised Aspire Capital that while it is engaged in a distribution of the shares included in this prospectus it is required to comply with Regulation M promulgated under the Securities Exchange Act of 1934, as amended. With certain exceptions, Regulation M precludes the selling stockholder, any affiliated purchasers, and any broker-dealer or other person who participates in the distribution from bidding for or purchasing, or attempting to induce any person to bid for or purchase any security which is the subject of the distribution until the entire distribution is complete. Regulation M also prohibits any bids or purchases made in order to stabilize the price of a security in connection with the distribution of that security. All of the foregoing may affect the marketability of the shares offered hereby this prospectus.

We may suspend the sale of shares by Aspire Capital pursuant to this prospectus for certain periods of time for certain reasons, including if the prospectus is required to be supplemented or amended to include additional material information.

This offering will terminate on the date that all shares offered by this prospectus have been sold by Aspire Capital.

## LEGAL MATTERS

The validity of the securities offered hereby is being passed upon for us by Cooley LLP, San Diego, CA.

## EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2016, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's report, given on their authority as experts in accounting and auditing.

## WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act, with respect to the securities being offered by this prospectus. This prospectus does not contain all of the information in the registration statement and its exhibits. For further information with respect to us and the securities offered by this prospectus, we refer you to the registration statement and its exhibits. Statements contained in this prospectus as to the contents of any contract or any other document referred to are not necessarily complete, and in each instance, we refer you to the copy of the contract or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

We are subject to the information and periodic reporting requirements of the Exchange Act, and we file periodic reports, proxy statements and other information with the SEC. You can read our SEC filings, including the registration statement, over the Internet at the SEC's website at www.sec.gov. You may also read and copy any document we file with the SEC at its public reference facilities at 100 F Street NE, Washington, D.C. 20549. You may also obtain copies of these documents at prescribed rates by writing to the Public Reference Section of the SEC at 100 F Street NE, Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities. You may also request a copy of these filings, at no cost, by writing us at 8910 University Center Lane, Suite 700, San Diego, CA 92122 or telephoning us at (858) 550-0780. We also maintain a website at www.traconpharma.com, at which you may access these materials free of charge after they are electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website is not incorporated by reference in, and is not part of, this prospectus.

## INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" information from other documents that we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus.

We incorporate by reference into this prospectus and the registration statement of which this prospectus form a part the information or documents listed below that we have filed with the SEC, and any future filings we will make with the SEC under Sections 13(a), 13(c), 14, or 15(d) of the Exchange Act after the date of the initial filing of the registration statement of which this prospectus is a part and prior to effectiveness of such registration statement, and until the termination of the offering of the shares covered by this prospectus (other than information furnished under Item 2.02 or Item 7.01 of Form 8-K):

- our Annual Report on Form 10-K for the year ended December 31, 2016 filed on March 1, 2017;

- our Current Reports on Form 8-K (other than information furnished rather than filed) filed on January 3, 2017, January 31, 2017, February 6, 2017, February 10, 2017, March 14, 2017 and March 27, 2017; and
- the description of our common stock which is registered under Section 12 of the Exchange Act, in our registration statement on Form 8-A, filed on January 27, 2015, including any amendment or reports filed for the purposes of updating this description.

Any statement contained in this prospectus or in a document incorporated or deemed to be incorporated by reference into this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or any other subsequently filed document that is deemed to be incorporated by reference into this prospectus modifies or supersedes the statement. Any statements so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

We will furnish without charge to you, on written or oral request, a copy of any or all of the documents incorporated by reference in this prospectus, including exhibits to these documents. You should direct any requests for documents to TRACON Pharmaceuticals, Inc. 8910 University Center Drive, Suite 700 San Diego CA 92122; telephone: (858) 550-0780.

You also may access these filings on our website at www.traconpharma.com. We do not incorporate the information on our website into this prospectus or any supplement to this prospectus and you should not consider any information on, or that can be accessed through, our website as part of this prospectus or any supplement to this prospectus (other than those filings with the SEC that we specifically incorporate by reference into this prospectus).

## DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITY

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers, and controlling persons, we have been advised that in the opinion of the SEC this indemnification is against public policy as expressed in the Securities Act and is therefore, unenforceable.

# 3,231,515 Shares

# Common Stock


**PROSPECTUS**

, 2017

## PART II

## INFORMATION NOT REQUIRED IN PROSPECTUS

### Item 13. Other Expenses of Issuance and Distribution

The following table sets forth the expenses to be incurred in connection with the offering described in this registration statement, all of which will be paid by the registrant. All amounts are estimates except the SEC registration fee.

| | Amount |
|---|---|
| SEC registration fee | $ 1,566 |
| Accounting fees and expenses | 17,500 |
| Legal fees and expenses | 25,000 |
| Printing and related expenses | 2,000 |
| Miscellaneous | 5,000 |
| Total expenses | $51,066 |

### Item 14. Indemnification of Directors and Officers

We are incorporated under the laws of the State of Delaware. Section 145 of the Delaware General Corporation Law provides that a Delaware corporation may indemnify any persons who were, are, or are threatened to be made, parties to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation), by reason of the fact that such person is or was an officer, director, employee or agent of such corporation, or is or was serving at the request of such corporation as an officer, director, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, provided that such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests and, with respect to any criminal action or proceeding, had no reasonable cause to believe that his or her conduct was illegal. A Delaware corporation may indemnify any persons who were, are, or are threatened to be made, a party to any threatened, pending or completed action or suit by or in the right of the corporation by reason of the fact that such person is or was a director, officer, employee or agent of such corporation, or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit provided such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests except that no indemnification is permitted without judicial approval if the officer or director is adjudged to be liable to the corporation. Where an officer or director is successful on the merits or otherwise in the defense of any action referred to above, the corporation must indemnify him or her against the expenses (including attorneys' fees) actually and reasonably incurred.

Our amended and restated certificate of incorporation and amended and restated bylaws provide for the indemnification of our directors and officers to the fullest extent permitted under the Delaware General Corporation Law.

Section 102(b)(7) of the Delaware General Corporation Law permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the corporation or its stockholders for monetary damages for breach of fiduciary duties as a director, except for liability for any:

- transaction from which the director derives an improper personal benefit;
- act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;

- unlawful payment of dividends or redemption of shares; or
- breach of a director's duty of loyalty to the corporation or its stockholders.

Our amended and restated certificate of incorporation includes such a provision. Expenses incurred by any officer or director in defending any such action, suit or proceeding in advance of its final disposition will be paid by us upon delivery to us of an undertaking, by or on behalf of such director or officer, to repay all amounts so advanced if it shall ultimately be determined that such director or officer is not entitled to be indemnified by us.

Section 174 of the Delaware General Corporation Law provides, among other things, that a director who willfully or negligently approves of an unlawful payment of dividends or an unlawful stock purchase or redemption, may be held liable for such actions. A director who was either absent when the unlawful actions were approved or dissented at the time may avoid liability by causing his or her dissent to such actions to be entered in the books containing minutes of the meetings of the board of directors at the time such action occurred or immediately after such absent director receives notice of the unlawful acts.

As permitted by the Delaware General Corporation Law, we have entered into, and continue to enter, into separate indemnity agreements with each of our directors and executive officers that require us to indemnify such persons against any and all costs and expenses (including attorneys', witness or other professional fees) actually and reasonably incurred by such persons in connection with any action, suit or proceeding (including derivative actions), whether actual or threatened, to which any such person may be made a party by reason of the fact that such person is or was a director or officer or is or was acting or serving as an officer, director, employee or agent of ours or any of our affiliated enterprises. Under these agreements, we are not required to provide indemnification for certain matters, including:

- indemnification beyond that permitted by the Delaware General Corporation Law;
- indemnification for any proceeding with respect to the unlawful payment of remuneration to the director or officer;
- indemnification for certain proceedings involving a final judgment that the director or officer is required to disgorge profits from the purchase or sale of our stock;
- indemnification for proceedings involving a final judgment that the director's or officer's conduct was in bad faith, knowingly fraudulent or deliberately dishonest or constituted willful misconduct or a breach of his or her duty of loyalty, but only to the extent of such specific determination;
- indemnification for proceedings or claims brought by an officer or director against us or any of our directors, officers, employees or agents, except for (1) claims to establish a right of indemnification or proceedings, (2) claims approved by our board of directors, (3) claims required by law, (4) when there has been a change of control as defined in the indemnification agreement with each director or officer, or (5) by us in our sole discretion pursuant to the powers vested to us under the Delaware General Corporate Law;
- indemnification for settlements the director or officer enters into without our consent; or
- indemnification in violation of any undertaking required by the Securities Act of 1933, as amended, or the Securities Act, or in any registration statement we file.

The indemnification agreements also set forth certain procedures that will apply in the event of a claim for indemnification thereunder.

There is at present no pending litigation or proceeding involving any of our directors or executive officers as to which indemnification is required or permitted, and we are not currently aware of any threatened litigation or proceeding that may result in a claim for indemnification.

We have an insurance policy in place that covers our officers and directors with respect to certain liabilities, including liabilities arising under the Securities Act or otherwise.

Any underwriting agreement that we may enter into may provide that the underwriters are obligated, under some circumstances, to indemnify our directors, officers and controlling persons against specified liabilities, including liabilities under the Securities Act.

**Item 15. Recent Sales of Unregistered Securities**

Set forth below is information regarding shares of common stock and preferred stock issued, and options granted, by us since January 1, 2014 that were not registered under the Securities Act of 1933, as amended (the Securities Act). Also included is the consideration, if any, received by us for such shares and options and information relating to the section of the Securities Act, or rule of the Securities and Exchange Commission, under which exemption from registration was claimed.

***(a) Issuances of Securities***

On March 14, 2017, we entered into the Common Stock Purchase Agreement with Aspire Capital Fund, LLC, or Aspire Capital. Pursuant to the terms of this agreement, Aspire Capital purchased 222,222 shares of our common stock at $4.50 per share and we issued 195,726 shares of our common stock to Aspire Capital in consideration for entering into the agreement.

In January 2017, we entered into a second amendment to an amended and restated loan and security agreement with Silicon Valley Bank ("SVB") under which SVB provided us with an $8.0 million loan, and in connection with the loan we issued a warrant to purchase 46,692 shares of our common stock at an exercise price of $5.14 per share.

In September 2016, we entered into transactions with Janssen Pharmaceutica N.V. ("Janssen) and its affiliate Johnson & Johnson Innovation-JJDC, Inc. ("JJDC") consisting of a license and option agreement with Janssen and a stock purchase agreement and investor agreement, each with JJDC, and in connection with the stock purchase agreement we sold 840,022 shares of our common stock at a purchase price of $5.95 per share to JJDC.

In September 2016, we issued 12,335 shares of common stock upon execution of a consulting agreement. The shares were issued in consideration of the consulting services to be provided.

In December 2015, we issued a warrant to purchase 3,683 shares of our common stock at an exercise price of $10.86 per share in connection with our amended and restated loan agreement with SVB.

In May 2015, we entered into an amended and restated loan and security agreement with SVB under which SVB provided us with an $10.0 million loan facility, and in connection with the loan we issued a warrant to purchase 14,732 shares of our common stock at an exercise price of $10.86 per share.

In September 2014, pursuant to a Series B stock purchase agreement, we issued an aggregate of 3,204,205 shares of our Series B redeemable convertible preferred stock at a purchase price of approximately $8.48 per share, for aggregate consideration of $27.2 million (after adjusting for stock split).

In June 2014, we issued a warrant to purchase 29,069 shares of our common stock at an exercise price of $7.74 per share in connection with a loan agreement with SVB.

The offers, sales and issuances of the securities described in this section (a) of Item 15 were deemed to be exempt from registration under the Securities Act in reliance on Section 4(a)(2) of the Securities Act and

Rule 506 promulgated under Regulation D promulgated thereunder as transactions by an issuer not involving a public offering. The recipients of securities in each of these transactions acquired the securities for investment only and not with a view to or for sale in connection with any distribution thereof and appropriate legends were affixed to the securities issued in these transactions. Each of the recipients of securities in these transactions was an accredited investor within the meaning of Rule 501 of Regulation D under the Securities Act and had adequate access, through employment, business or other relationships, to information about the Company. No underwriters were involved in these transactions.

***(b) Stock Option and Restricted Stock Grants***

Since January 1, 2014, we have granted stock options to purchase an aggregate of 1,921,64 shares of our common stock, with exercise prices ranging from $0.70 to $17.38 per share, of which 209,895 stock options have been forfeited and 130,209 stock options have been exercised as of March 14, 2017. Since January 1, 2014, we have granted 306,780 restricted stock units, of which zero have been forfeited and 64,878 have been released as of March 14, 2017.

The securities described in this section (b) of Item 15 were deemed to be exempt from registration under the Securities Act in reliance on Rule 701 in that the transactions were under compensatory benefit plans and contracts relating to compensation as provided under Rule 701. The recipients of such securities were the Registrant's employees, directors or bona fide consultants and received the securities under the Company's 2011 Equity Incentive Plan. Appropriate legends were affixed to the securities issued in these transactions. Each of the recipients of securities in these transactions had adequate access, through employment, business or other relationships, to information about the Company.

**Item 16. Exhibits and Financial Statement Schedules**

(a) The exhibits to the registration statement are listed in the Exhibit Index attached hereto and incorporated by reference herein.

(b) No financial statement schedules are provided because the information called for is not required or is shown either in the financial statements or notes

**Item 17. Undertakings**

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof; and

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness; provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(b) The undersigned registrant hereby undertakes to deliver or cause to be delivered with the prospectus, to each person to whom the prospectus is sent or given, the latest annual report to security holders that is incorporated by reference in the prospectus and furnished pursuant to and meeting the requirements of Rule 14a-3 or Rule 14c-3 under the Securities Exchange Act of 1934; and, where interim financial information required to be presented by Article 3 of Regulation S-X are not set forth in the prospectus, to deliver, or cause to be delivered to each person to whom the prospectus is sent or given, the latest quarterly report that is specifically incorporated by reference in the prospectus to provide such interim financial information.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted for our directors, officers and controlling persons of the Registrant pursuant to our Articles of Incorporation or Amended and Restated Bylaws, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer, or controlling person in the successful defense of any action, suit or proceeding) is asserted by such director, officer, or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by the registrant is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

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## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Diego, State of California on March 27, 2017.

**TRACON Pharmaceuticals, Inc.**

By: /s/ Charles P. Theuer
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 Charles P. Theuer and Patricia L. Bitar, and each and either of them, his or her true and lawful attorney-in-fact and agent, each with full power of substitution and resubstitution, for him or her and in his or her name, place, and stead, in any and all capacities, to (i) act on, sign and file with the Securities and Exchange Commission any and all amendments (including post-effective amendments) to this registration statement together with all schedules and exhibits thereto and any subsequent registration statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, together with all schedules and exhibits thereto, (ii) act on, sign and file such certificates, instruments, agreements and other documents as may be necessary or appropriate in connection therewith, (iii) act on and file any supplement to any prospectus included in this registration statement or any such amendment or any subsequent registration statement filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and (iv) take any and all actions which may be necessary or appropriate to be done, as fully for all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities indicated on the dates indicated.

| Signature | Title | Date |
|---|---|---|
| /s/ Charles P. Theuer, M.D., PH.D.<br>Charles P. Theuer, M.D., Ph.D. | President, Chief Executive Officer and Member of the Board of Directors<br>*(Principal Executive Officer)* | March 27, 2017 |
| /s/ Patricia L. Bitar, CPA<br>Patricia L. Bitar, CPA | Chief Financial Officer, Assistant Secretary and Treasurer<br>*(Principal Financial and Accounting Officer)* | March 27, 2017 |
| /s/ William R. LaRue<br>William R. LaRue | Member of the Board of Directors | March 27, 2017 |
| /s/ Martin A. Mattingly, Pharm. D.<br>Martin A. Mattingly, Pharm.D. | Member of the Board of Directors | March 27, 2017 |
| /s/ J. Rainer Twiford, J.D., PH.D<br>J. Rainer Twiford, J.D., Ph.D. | Member of the Board of Directors | March 27, 2017 |
| /s/ Paul Walker<br>Paul Walker | Member of the Board of Directors | March 27, 2017 |
| /s/ Stephen T. Worland<br>Stephen T. Worland., Ph.D. | Member of the Board of Directors | March 27, 2017 |

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## Exhibit Index

| 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(9) | Investor Agreement by and between the Registrant and Johnson & Johnson Innovation-JJDC, Inc. dated September 27, 2016. |
| 4.4(14) | Registration Rights Agreement, dated March 14, 2017, by and between the Registrant and Aspire Capital Fund, LLC. |
| 5.1 | Opinion of Cooley LLP. |
| 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+(8) | 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+(13) | TRACON Pharmaceuticals, Inc. Bonus Plan, as amended January 20, 2017. |
| 10.7+(13) | Amended and Restated Employment Agreement by and between the Registrant and Charles P. Theuer, M.D., Ph.D., dated February 27, 2017. |
| 10.8+(13) | Amended and Restated Employment Agreement by and between the Registrant and H Casey Logan, M.B.A., dated February 27, 2017. |
| 10.9+(13) | Employment Agreement by and between the Registrant and Patricia Bitar, dated February 27, 2017. |
| 10.10+(13) | 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+(13) | Severance Agreement by and between the Registrant and H Casey Logan, M.B.A., dated February 27, 2017. |
| 10.13(2) | Office Lease Agreement by and between the Registrant and Glenborough Aventine, LLC, dated February 10, 2011, as amended on September 16, 2013 and September 15, 2014. |
| 10.14(5) | Third Amendment to Office Lease Agreement by and between the Registrant and Glenborough Aventine, LLC, dated February 20, 2015. |
| 10.15(7) | Fourth Amendment to Office Lease Agreement by and between the Registrant and Glenborough Aventine, LLC, dated November 30, 2015. |
| 10.16*(2) | License Agreement by and between the Registrant and Santen Pharmaceutical Co., Ltd., dated March 3, 2014, as amended. |

| Exhibit Number | Description of Document |
|---|---|
| 10.17*(7) | Second Amendment to License Agreement by and between the Registrant and Santen Pharmaceutical Co., Ltd., dated January 31, 2016. |
| 10.18*(2) | License Agreement by and among the Registrant and Roswell Park Cancer Institute and Health Research, Inc., dated November 1, 2005, as amended on November 12, 2009, February 11, 2010 and September 18, 2014. |
| 10.19*(2) | License Agreement by and between the Registrant and Case Western Reserve University, dated August 2, 2006. |
| 10.20*(4) | Amendment to Case License Agreement by and between the Registrant and Case Western Reserve University, dated April 3, 2015. |
| 10.21*(2) | License Agreement by and between the Registrant and Lonza Sales AG, dated June 29, 2009. |
| 10.22*(11) | License and Option Agreement by and Between Janssen Pharmaceutica N.V. and TRACON Pharmaceuticals, Inc., dated September 27, 2016. |
| 10.23(2) | Warrant to Purchase Stock issued to Silicon Valley Bank on November 14, 2013. |
| 10.24(2) | Warrant to Purchase Stock issued to Silicon Valley Bank on June 4, 2014. |
| 10.25(4) | Warrant to Purchase Stock issued to Silicon Valley Bank on May 13, 2015. |
| 10.26(10) | Warrant to Purchase Stock issued to Silicon Valley Bank on January 25, 2017. |
| 10.27*(9) | Stock Purchase Agreement by and Between the Registrant and Johnson & Johnson-JJDC, Inc. dated September 27, 2016. |
| 10.28(6) | At-the-Market Equity Offering Sales Agreement, dated as of February 1, 2016, by and between the Registrant and Stifel, Nicolaus & Company, Incorporated. |
| 10.29(4) | Amended and Restated Loan and Security Agreement by and between the Registrant and Silicon Valley Bank, dated May 13, 2015. |
| 10.30(8) | First Amendment to Amended and Restated Loan and Security Agreement by and between the Registrant and Silicon Valley Bank, dated August 9, 2016. |
| 10.31(10) | Second Amendment to Amended and Restated Loan and Security Agreement by and between the Registrant and Silicon Valley Bank, dated January 25, 2017. |
| 10.32*(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. |
| 10.33(7) | 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. |
| 10.34*(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. |
| 10.35(7) | 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. |
| 10.36*(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. |

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| Exhibit Number | Description of Document |
|---|---|
| 10.37*(2) | Sponsored Research Agreement by and between the Registrant and Tufts Medical Center, Inc., dated December 16, 2014. |
| 10.38(12) | Lease by and between the Registrant and 4350 La Jolla Village LLC, dated December 12, 2016. |
| 10.39* | Manufacturing Agreement by and between the Registrant and Lonza Biologics Tuas Pte Ltd, dated February 22, 2017. |
| 10.40(14) | Common Stock Purchase Agreement by and between the Registrant and Aspire Capital Fund, LLC, dated March 14, 2017 |
| 23.1 | Consent of Independent Registered Public Accounting Firm. |
| 23.2 | Consent of Cooley LLP (included in Exhibit 5.1). |
| 24.1 | Power of Attorney (included on the signature page of this Registration Statement). |

+ 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 Annual Report on Form 10-K, filed with the SEC on March 11, 2015.
(6) Incorporated by reference to the Registrant's Current Report on Form 8-K, filed with the SEC on February 1, 2016.
(7) Incorporated by reference to the Registrant's Annual Report on Form 10-K, filed with the SEC on February 19, 2016.
(8) 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.
(9) 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.
(10) Incorporated by reference to the Registrant's Current Report on Form 8-K, filed with the SEC on January 31, 2017.
(11) 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.
(12) Incorporated by reference to the Registrant's Current Report on Form 8-K, filed with the SEC on December 13, 2016.
(13) Incorporated by reference to the Registrant's Annual Report on Form 10-K, filed with the SEC on March 1, 2017.
(14) Incorporated by reference to the Registrant's Current Report on Form 8-K, filed with the SEC on March 14, 2017.

Cooley

**Exhibit 5.1**

SEAN M. CLAYTON
+1 858 550 6034
sclayton@cooley.com

March 27, 2017

TRACON Pharmaceuticals, Inc.
8910 University Center Lane, Suite 700
San Diego, CA 92122

Ladies and Gentlemen:

You have requested our opinion with respect to certain matters in connection with the filing by TRACON Pharmaceuticals, Inc., a Delaware corporation (the "**Company**"), of a Registration Statement on Form S-1 (the "**Registration Statement**") with the Securities and Exchange Commission, covering the registration for resale of (i) 417,948 shares (the "**Shares**") of the Company's common stock, par value $0.001, issued to Aspire Capital Fund, LLC ("**Aspire**"), and (ii) up to 2,813,567 shares of the Company's common stock, par value $0.001 (the "**Agreement Shares**") that may be issued from time to time pursuant to a common stock purchase agreement dated March 14, 2017 (the "**Purchase Agreement**"), between the Company and Aspire.

In connection with this opinion, we have examined and relied upon the Registration Statement and related prospectus, the Company's Certificate of Incorporation, as amended, and its Amended and Restated Bylaws, each as currently in effect, the Purchase Agreement and the originals or copies certified to our satisfaction of such other records, documents, certificates, memoranda and other instruments as in our judgment are necessary or appropriate to enable us to render the opinion expressed below.

We have assumed the genuineness and authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as copies thereof and the due execution and delivery of all documents where due execution and delivery are a prerequisite to the effectiveness thereof. As to certain factual matters, including without limitation the receipt by the Company of the purchase price for the Shares as provided in the Purchase Agreement, we have relied upon a certificate of an officer of the Company and have not sought independently to verify such matters.

Our opinion is expressed only with respect to the General Corporation Law of the State of Delaware. We express no opinion as to whether the laws of any particular jurisdiction are applicable to the subject matter hereof. We are not rendering any opinion as to compliance with any federal or state antifraud law, rule or regulation relating to securities, or to the sale or issuance thereof.

With regard to our opinion in clause (ii) below concerning the Agreement Shares, we have assumed that all Agreement Shares issuable pursuant to the Purchase Agreement are issued on the date hereof (notwithstanding any conditions or limitations restricting such exercise or issuance set forth in the Purchase Agreement).

On the basis of the foregoing, and in reliance thereon, we are of the opinion that (i) the Shares are validly issued, fully paid and non-assessable and (ii) upon issuance and delivery of the Agreement Shares by the Company in accordance with the terms of the Purchase Agreement, including, without limitation, the payment in full of the applicable consideration therefor, the Agreement Shares will be validly issued, fully paid and non-assessable.

We consent to the reference to our firm under the caption "Legal Matters" in the Registration Statement and in the related prospectus and to the filing of this opinion as an exhibit to the Registration Statement.

Sincerely,

Cooley LLP

By: /s/ Sean M. Clayton
Sean M. Clayton

**Exhibit 10.39**

*****Text Omitted and Filed Separately**
**with the Securities and Exchange Commission.**
**Confidential Treatment Requested**
**Under 17 C.F.R. Sections 200.80(b)(4) and Rule 406 of the**
**Securities Act of 1933, as amended.**

# Manufacturing Agreement

(the "Agreement")

by and between

**Lonza Biologics Tuas Pte Ltd**
35 Tuas South Avenue 6,
SG-Singapore,
637377

- hereinafter "Lonza" -

and

**TRACON Pharmaceuticals Inc.**
8910 University Centre Lane,
Suite 700,
San Diego,
CA 92122

- hereinafter "Customer" -

Effective as of 22 February, 2017 (the "Effective Date")

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**Recitals**

WHEREAS, Customer is engaged in the development and research of certain products and requires assistance in the development and manufacture of product;

WHEREAS, Lonza and its Affiliates have expertise in the evaluation, development and manufacture of products;

WHEREAS, Customer wishes to engage Lonza for Services relating to the development and manufacture of the Product as described in this Agreement; and

WHEREAS, Lonza, or its Affiliate, is prepared to perform such Services for Customer on the terms and subject to the conditions set out herein.

NOW, THEREFORE, in consideration of the mutual promises contained herein, and for other good and valuable consideration, the parties intending to be legally bound, agree as follows:

## 1 Definitions and Interpretation

| | |
|---|---|
| "Additional Batches" | shall have the meaning set out in Clause 6.2. |
| "Affiliate" | means any company, partnership or other entity which directly or indirectly Controls, is Controlled by or is under common Control with the relevant Party. "Control" means the ownership of more than fifty percent (50%) of the issued share capital or the legal power to direct or cause the direction of the general management and policies of the relevant Party. |
| "Agreement" | means this agreement incorporating all Appendices, as amended from time to time by written agreement of the Parties. |
| "Alternate Product" | means such product which the Parties agree may be substituted in place of the Product in accordance with Clause 6.1, and after such substitution all references in this Agreement to "Product" shall be deemed to apply to such Alternate Product. |
| "Applicable Laws" | means all relevant U.S. and European Union federal, state and local laws, statutes, rules, and regulations which are applicable to a Party's activities hereunder, including, without limitation, the applicable regulations and guidelines of any Governmental Authority and all applicable cGMP together with amendments thereto. |
| "Approval" | means the first marketing approval by the FDA or EMA of Product from the Facility for commercial supply and the date of first Approval |

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| | shall be the date on which the first such approval occurs. |
| "Background Intellectual Property" | means any Intellectual Property either (i) owned or controlled by a Party prior to the Effective Date or (ii) developed or acquired by a Party independently from the performance of the Services hereunder during the Term of this Agreement. |
| "Batch" | means the Product derived from a single run of the Manufacturing Process at the Facility at […***…] litre scale. |
| "Batch Price" | means the Price of each Batch as set out in Appendix A and as may be adjusted from time to time in accordance with this Agreement. |
| "Campaign" | means a series of no less than […***…] cGMP Batches manufactured consecutively. |
| "Cancellation Fee" | has the meaning given in Clause 6.7. |
| "Capital Equipment" | means those certain pieces of equipment described in the Project Plan used to produce the Product that are purchased by Customer or for which Customer reimburses Lonza, including, without limitation, the related documentation regarding the design, validation, operation, calibration and maintenance of such equipment. |
| "Cell Line" | means the Customer's cell line, the particulars of which are set out in Appendix B. |
| "Certificate of Analysis" | means a document prepared by Lonza listing tests performed by Lonza or approved External Laboratories, the Specifications and test results. |
| "Certificate of Compliance" | means a document prepared by Lonza: (i) listing the manufacturing date, unique Batch number, and concentration of Product in such Batch; and (ii) certifying that such Batch was manufactured in accordance with the Master Batch Record and cGMP, if applicable. |
| "cGMP" | means those laws and regulations applicable in the U.S. and European Union, relating to the manufacture of medicinal products for human use, including, without limitation, current good manufacturing practices as specified in the ICH guidelines, including without limitation, ICH Q7A "ICH Good Manufacturing Practice Guide for Active Pharmaceutical Ingredients", US Federal Food Drug and Cosmetic Act at 21CFR |

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| | (Chapters 210, 211, 600 and 610) and the Guide to Good Manufacturing Practices for Medicinal Products as promulgated under European Directive 91/356/EEC. For the avoidance of doubt, Lonza's operational quality standards are defined in internal cGMP policy documents. |
| "cGMP Batches" | means any Batches which are required under the Project Plan to be manufactured in accordance with cGMP. |
| "Commencement Date" | means the date of removal of the vial of cells from frozen storage for the production of a Batch. |
| "Confidential Information" | means Customer Information and/or Lonza Information, as the context requires. |
| "Customer Information" | means all technical and other information not previously known to Lonza or in the public domain that is: (a) from time to time (including prior to the date of this Agreement) supplied by or on behalf of the Customer to Lonza, including any materials supplied by Customer to Lonza in accordance with the Project Plan; or (b) New Customer Intellectual Property. |
| "Customer Materials" | means any Raw Materials, components of Product, or other materials of any nature provided by Customer. |
| "Customer Withdrawal" | means a good-faith determination by the Customer's board of directors, as a result of regulatory, safety and/or efficacy concerns regarding the Product, to completely and permanently cease development and promotion of the Product for all indications anywhere in the world and not to seek any marketing approvals anywhere in the world therefor. |
| "EMA" | means the European Medicines Agency, or any successor agency thereto. |
| "Engineering Batches" | means a Batch that is intended to demonstrate the transfer of the Manufacturing Process to the Facility. |
| "External Laboratories" | means any Third Party instructed by Lonza, with Customer's prior consent, which is to conduct activities required to complete the Services. |
| "Facility" | means Lonza's […***…] manufacturing facilities in Singapore. |

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| “Failed Batch” | shall have the meaning set out in Clause 7.3.3. |
| “Failed Engineering Batch” | shall have the meaning set out in Clause 7.3.3. |
| “FDA” | means the United States Food and Drug Administration, or any successor agency thereto. |
| “Governmental Authority” | means any Regulatory Authority and any national, multi-national, regional, state or local regulatory agency, department, bureau, or other governmental entity in the U.S. or European Union. |
| “GS” | means the glutamine synthetase expression system of which Lonza is the proprietor. |
| “GS Licence” | means a licence granted by Lonza in respect of the use of GS. |
| “Intellectual Property” | means: (i) inventions (whether or not patentable), patents, trade secrets, copyrights, trademarks, trade names and domain names, rights in designs, rights in computer software, database rights, rights in Confidential Information (including know-how) and any other intellectual property rights, in each case whether registered or unregistered; (ii) all applications (or rights to apply) for, and renewals or extensions of, any of the rights described in the foregoing sub-clause (i); and (iii) all rights and applications that are similar or equivalent to the rights and applications described in the foregoing sub-clauses (i) and (ii), which exist now, or which come to exist in the future, in any part of the world. |
| “Lonza Information” | means all information that is proprietary to Lonza or any Affiliate of Lonza and that is maintained in confidence by Lonza or any Affiliate of Lonza and that is from time to time (at any time including prior to the date of this Agreement) disclosed by Lonza or any Affiliate of Lonza to Customer under or in connection with this Agreement, including without limitation, any and all Lonza know-how and trade secrets. |
| “Lonza Responsibility” | has the meaning given in Clause 7.3.3. |
| “Manufacturing Process” | means the production process for the manufacture of Product which may include Background Intellectual Property of Customer and Background Intellectual Property of Lonza, as such process may be improved or modified |

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| | from time to time by agreement of the Parties in writing. |
| "Master Batch Record" | means the document, proposed by Lonza and approved by Customer, which defines the manufacturing methods, test methods and other procedures, directions and controls associated with the manufacture and testing of Product. |
| "MO Year" | means a period of twelve (12) calendar months beginning on the date of first Approval and subsequent MO Years shall commence on each anniversary of the date of first Approval throughout the Term. |
| "Minimum Order" or "MO" | shall have the meaning set out in Clause 6.3. |
| "New Customer Intellectual Property" | has the meaning given in Clause 10.2. |
| "New General Application Intellectual Property" | has the meaning given in Clause 10.3. |
| "Operational Failure" | means the suspension by Lonza of production of Product for more than […***…] consecutive days or […***…] non-consecutive days within a […***…] period due to the occurrence of a failure at the Facility or in the equipment used to manufacture Product (and where such failure is not attributable to […***…]. Operational Failure would include, without limitation, such a suspension by Lonza due to […***…]. |
| "Party" | means each of Lonza and Customer and, together, the "Parties". |
| "Persistent Supply Failure" | means the Delivery by Lonza of less than […***…] percent ([…***…]%) of the Minimum Order over a period comprising at least […***…] consecutive Campaigns. |
| "Pilot Batch" | means a Batch of Product designated as a pilot Batch which shall not comply with cGMP and is not required to meet the Specifications. |
| "Price" | means the price for the Services and Products as set out in Appendix A. |
| "Process Validation Batch" | means a Batch that is produced with the intent to show reproducibility of the |

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| | Manufacturing Process and is required to complete process validation studies. |
| "Product" | means the product known as TRC-105, to be manufactured using the Manufacturing Process by Lonza for Customer as specified in the Project Plan, or the Alternate Product. |
| "Project Plan" | means the plan(s) describing the Services to be performed by Lonza under this Agreement, including any update and amendment of the Project Plan to which the Parties may agree from time to time. The initial Project Plan shall be agreed between the Parties in accordance with Clause 3.1. |
| "Quality Agreement" | means the quality agreement executed by both Parties, setting out the responsibilities of the Parties in relation to quality as required for compliance with cGMP. |
| "Raw Materials" | means all ingredients, solvents and other components of the Product required to perform the Manufacturing Process or Services set forth in the bill of materials detailing the same (including Resins but excluding any wearables). |
| "Raw Materials Fee" | means the procurement and handling fee of […***…] percent ([…***…]%) of the acquisition cost of Raw Materials by Lonza that is charged to the Customer in addition to the cost of such Raw Materials, except for […***…] which shall not be subject to a procurement and handling fee. |
| "Regulatory Authority" | means the FDA, EMA and any other similar regulatory authorities as may be agreed upon in writing by the Parties. |
| "Resin" | means the chromatographic media and/or UF membranes intended to refine or purify the Product, as specified in the Master Batch Record. |
| "Safety Stock" | has the meaning set out in Clause 2.7. |
| "Services" | means all or any part of the services to be performed by Lonza under this Agreement, particulars of which are set out in a Project Plan. |
| "Shortfall Notice" | shall have the meaning set out in Clause 6.5. |
| "Specifications" | means the specifications of the Product as specified in Appendix B, which may be |

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| | amended from time to time in accordance with this Agreement. |
| "Steering Committee" | shall have the meaning set out in Clause 3.3. |
| "Term" | has the meaning given in Clause 14.1. |
| "Third Party" | means any party other than Customer, Lonza and their respective Affiliates. |

In this Agreement references to the Parties are to the Parties to this Agreement, headings are used for convenience only and do not affect its interpretation, references to a statutory provision include references to the statutory provision as modified or re-enacted or both from time to time and to any subordinate legislation made under the statutory provision, references to the singular include the plural and vice versa, and references to the word "including" are to be construed without limitation.

**2 Performance of Services and Exclusivity**

2.1 Performance of Services. Subject to Customer fulfilling its obligations under Clause 2.2, Lonza shall itself and through its Affiliates, diligently and consistent with industry standards, carry out the Services as provided in the Project Plan and in accordance with the terms and conditions of this Agreement and use commercially reasonable efforts to perform the Services according to the estimated timelines as set forth in the Project Plan (owing to the unpredictable nature of the biological processes involved in the Services, the timescales set down for the performance of the Services are estimated only); provided that Lonza shall remain fully responsible for its Affiliates' performance of all obligations delegated to such Affiliates. Lonza shall retain appropriately qualified and trained personnel with the requisite knowledge and experience to perform the Services in accordance with this Agreement. Lonza may subcontract or delegate any of its rights or obligations under this Agreement to perform the Services to Third Parties with Customer's prior written consent, which consent shall not be unreasonably withheld, or to External Laboratories to provide some of the Services; provided that […***…].

2.2 Technology Transfer. The Parties expressly agree that they shall work together to transfer the Manufacturing Process into the Facility, including implementing the technology transfer plan set forth in the Project Plan. The Parties shall use their commercially reasonable efforts to complete such technology transfer according to the Project Plan according to the estimated timelines set forth therein, and Customer shall fully support such technology transfer as reasonably requested by Lonza. The price for such technology transfer and process validation activities shall be as set out in Appendix A.

2.2A Pilot Batches. Lonza shall manufacture Pilot Batches in accordance with the Project Plan, but shall have no obligation to, and makes no warranty, that Pilot Batches will meet Specification or be manufactured in accordance with cGMP. Customer shall have the right to make whatever use of the Pilot Batches as it

shall determine, provided that Customer pays Lonza the Price for such Pilot Batches, and such use is not for human use and does not violate any Applicable Laws.

2.3 Engineering Batches. Lonza shall manufacture, and Customer shall pay for, Engineering Batches in accordance with the Project Plan. Customer shall have the right to make whatever further use of the non-cGMP Engineering Batches as it shall determine, provided that Customer pays for such Batches, such use is not for human use and does not violate any Applicable Laws. Lonza makes no warranty that Engineering Batches will meet cGMP or the Specifications. If Lonza determines that an Engineering Batch does meet cGMP and the Specifications, it will release such Engineering Batch as a cGMP Batch. Nothing in this Clause 2.3 shall be construed to limit Customer's remedies set forth in Clause 7.3.3. Notwithstanding anything to the contrary, no Engineering Batches shall commence until Lonza has completed a Pilot Batch at the Facility. In the event that there is a material difference in the process assumptions as compared with the process results demonstrated during the manufacture of Engineering Batches, the Parties shall meet to discuss in good faith the consequences of such changes.

2.4 cGMP Batches. Lonza will, in accordance with the terms of this Agreement and the Quality Agreement, manufacture at the Facility and release to Customer, cGMP Batches that comply with the Manufacturing Process, the Quality Agreement, cGMP and the Specifications, together with a Certificate of Analysis; provided, however, that cGMP manufacture shall not commence until at least […***…]. Prior to commencement of cGMP manufacturing, the Parties shall jointly review the process assumptions.

2.5 Process Validation Batches. Lonza shall manufacture and deliver Process Validation Batches as mutually agreed by the Parties sufficient to document the operability and reproducibility of the Manufacturing Process and permit the Parties to complete and file the necessary regulatory documents.

2.5.1 Prior to commencement of Process Validation Batches, Lonza and Customer shall agree to a process validation plan identifying the validation requirements of the Manufacturing Process. All process validation activities are excluded from the Price of Process Validation Batches, shall be approved by the Customer in advance, and shall be paid for by the Customer at the Price set out in the applicable Project Plan.

2.5.2 Any regulatory support activities (including pre-Approval inspection) required and agreed to by Customer to support the Approval of the Product from the Facility shall be performed and supported by Lonza as reasonably requested by Customer. All such regulatory support activities are excluded from the Price of Process Validation Batches, shall be approved by the Customer in advance, and shall be paid for by the Customer at the Price set out in the applicable Project Plan.

2.6 Supply of Customer Information and Customer Materials. Customer shall supply to Lonza all Customer Information and Customer Materials, the Cell Line, and other information or materials that may be reasonably required by Lonza to perform the Services. Lonza shall not be responsible for any delays arising out of Customer's failure to provide Lonza with such Customer Information, Customer Materials, the Cell Line, or other information or materials reasonably

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required to perform the Services, and Customer shall be responsible for all additional costs and expenses arising out of such delay, including, if applicable, any idle Facility capacity costs.

2.7 Raw Materials. Lonza shall procure all required Raw Materials as well as consumables other than those Raw Materials that are Customer Materials. Subject to agreement between the Parties, Lonza shall purchase additional Raw Materials and Resins in accordance with Lonza's standard policy ("Safety Stock"). Except as otherwise provided in Appendix A, Customer shall be responsible for payment for all consumables and Raw Materials ordered or irrevocably committed to be procured by Lonza hereunder (including Safety Stock) in accordance with Clause 8.6. Upon cancellation of any Batch by Customer (whether a Pilot Batch, an Engineering Batch, a cGMP Batch or a Process Validation Batch or otherwise) or termination of the Agreement, all unused Raw Materials and Resins shall be paid for by Customer within thirty (30) days of invoice and at Customer's option will either be: (a) held by Lonza for future use for the production of Product; (b) delivered to Customer; (c) disposed of by Lonza; or (d) returned to the supplier, to the extent permitted by the supplier. Lonza will credit Customer for any credits received by Lonza directly in connection with the return of Raw Materials for which Customer has already paid Lonza. Lonza shall manage any Safety Stock in accordance with its standard Safety Stock policy and the Quality Agreement. Customer shall own all consumables and Raw Materials (including Safety Stock) which Customer has paid for or reimbursed Lonza pursuant to this Section 2.7, and Lonza shall not subject any such consumables and Raw materials to any liens or encumbrances and shall use reasonable care to store and safeguard such consumables and Raw Materials while in Lonza's possession or control.

2.8 Immediately following the Effective Date the Customer shall supply to Lonza the Customer Information reasonably required by Lonza to perform the Services, together with full details of any hazards relating to the Cell Line, and the Customer Materials, their storage and use. On review and approval by Lonza's safety committee of this Customer Information, the Cell Line, the Customer Materials, Customer Background Intellectual Property, and any other necessary Intellectual Property shall be provided to Lonza at Lonza's request.

2.9 Where the Cell Line uses GS, the Customer acknowledges that it will require a GS Licence from Lonza prior to in vivo clinical studies or any other commercial use or sale of the Product.

## 3 Project Management / Steering Committee / Future Scale-Up

3.1 Project Plans. With respect to a new project to be governed by this Agreement, a new Project Plan shall be added by agreement in writing signed by the Parties and appended to this Agreement. Each Project Plan shall include a description of the Services to be provided, the Product to be manufactured, Specifications, a schedule for completion of the Project Plan, pricing details, and such other information as is necessary for relevant Services. In the event of a conflict between the terms of a Project Plan and this Agreement, the terms of this Agreement will govern.

3.2 Project Management. With respect to each Project Plan, each party will appoint a project manager who will be the party responsible for overseeing the Project Plan.

3.3 Steering Committee. Promptly after execution of this Agreement, the Parties shall establish a steering committee to oversee, review and coordinate the activities of the Parties under this Agreement and facilitate communications between the Parties with respect to such activities (the "Steering Committee"). Each Party shall name a mutually agreed upon equal number of representatives for the Steering Committee, which shall meet twice per calendar year, or as otherwise mutually agreed by the Parties. In the event that a Steering Committee dispute cannot be resolved within […***…] days, such dispute shall be escalated to a senior executive of each of Customer and Lonza. If such senior executives are unable to resolve such dispute within […***…] days of such escalation, then either Party may pursue any and all remedies available at law in accordance with Clause 16.

The primary function of the Steering Committee is to ensure the ongoing communication between the Parties and discuss and resolve any issues arising under this Agreement. In addition to the primary function described above, the Steering Committee shall also take on the following responsibilities:

3.3.1 discuss and seek resolution of issues around management of the Services;

3.3.2 agree and monitor the Facility construction and start-up plan, deadlines and milestones for the Services;

3.3.3 discuss and seek resolution for any Batch failures and/or unreleased Batches;

3.3.4 discuss and recommend any changes to the Services (although such changes will not take effect until they have been incorporated into a written amendment to the Project Plan which has been signed by the Parties); and

3.3.5 discuss and seek resolution for any dispute regarding the terms of a technology transfer pursuant to Clause 10.7.

3.4 Person in Plant. Customer shall be permitted to have, […***…] employees or consultants (provided that such consultants enter into an appropriate confidentiality and non-use agreement with Lonza) at the Facility as reasonably requested by Customer, at any time during the Manufacturing Process for the purpose of observing, reporting on, and consulting as to the performance of the Services. Such employees or consultants shall be subject to and agree to abide by confidentiality obligations to Third Parties and Lonza's customary practices and operating procedures regarding persons in plant, and such employees or consultants shall agree to comply with all instructions of Lonza's employees at the Facility.

3.5 In the event Customer wishes to transition production of the Product from the Facility to another asset or facility within the Lonza network the Parties shall enter into good faith discussions to agree upon the terms of such transition.

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## 4 Quality

4.1 Responsibility for quality assurance and quality control of Product shall be allocated between Customer and Lonza as set forth in the Quality Agreement and in Lonza standard operating procedures. If there is a conflict between the terms and conditions of this Agreement and the Quality Agreement, the terms and conditions of this Agreement shall prevail, with the exception that the Quality Agreement shall control for matters directly relating to the quality and disposition of the Product and Raw Materials and the matters referenced in Clause 4.2. If the Quality Agreement is not in place at the Effective Date, Lonza and Customer commit to enter into the Quality Agreement in a timely manner, but in no event later than the commencement of cGMP manufacturing.

4.2 Provisions regarding inspections by Regulatory Authorities and audits shall be set out in the Quality Agreement.

## 5 Insurance

5.1 Each Party shall, during the Term and for […***…] after Delivery of the last Product manufactured or Services provided under this Agreement, obtain and maintain at its own cost and expense from a qualified insurance company, comprehensive general liability insurance including, but not limited to, contractual liability coverage and product liability coverage in the amount of at least […***…] per claim. Each Party shall provide the respective other Party with a certificate of such insurance upon reasonable request.

## 6 Forecasting, Ordering and Cancellation

6.1 Alternate Product. Customer may request Lonza to manufacture an Alternate Product in place of the Product subject to Lonza's agreement and subject to a suitable amendment to the Agreement to be completed between Parties that shall set out the terms for the transfer of the Alternate Product into the Facility and for payment of all such additional costs as reasonably incurred by Lonza in the completion of such transfer, as well as the price and terms on which Lonza shall manufacture the Alternate Product.

6.2 Forecasting. No later than […***…] of each […***…], Customer shall supply Lonza with a written forecast showing Customer's good faith estimated quarterly requirements for […***…] Batches to be manufactured by Lonza in the following […***…] month period, which shall include the Batches comprising the Minimum Order and any Additional Batches (as defined below) (the "Forecast"). No later than […***…] days following Lonza's receipt of a Forecast, Lonza shall deliver written notice to Customer stating: (i) whether it has (at the date of receipt of the Forecast) capacity available to manufacture any Batches in excess of the Minimum Order (including any cGMP Batches covered by purchase orders submitted prior to Approval) forecast in Customer's Forecast ("Additional Batches"); (ii) an estimated production schedule showing the estimated Commencement Date and Delivery date of each Batch within the Minimum Order requirement; and (iii) an estimated production schedule showing the estimated Commencement Date and Delivery date for any Additional Batches Forecast by Customer that Lonza has capacity to manufacture. Lonza's response to the Forecast (including (i), (ii) and (iii)) being the "Response". For the avoidance of any doubt, Lonza shall not have any obligation to fulfil any

demand Forecast by Customer for Additional Batches except to the extent, and solely in its discretion, Lonza accepts purchase orders for any Additional Batches. Except as provided in Clauses 6.3 and 6.4, the Forecast and Response shall not be binding on either Customer or Lonza.

6.3 Minimum Order.

6.3.1 Customer undertakes to purchase from Lonza, and Lonza undertakes to manufacture, a minimum of […***…] cGMP Batches in each MO Year (the "Minimum Order"). Pilot Batches and/or Engineering Batches and/or Process Validation Batches shall not form part of the Minimum Order, unless the Parties agree otherwise. This shall be regarded as a "take or pay" obligation, meaning that if Customer fails to purchase such Minimum Order, Customer shall pay the Batch Price for the number of Batches below the minimum by the date which would have been the Commencement Date for the first such Batch; provided that Customer shall not be obligated to pay for any portion of such […***…] cGMP Batches that Lonza is unable to Deliver.

6.3.2 If at any time during any MO Year, Lonza provides a Shortfall Notice to Customer, Customer's obligations under Clause 6.3.1 shall be […***…].

6.3.3 As at the date of this Agreement, Customer hereby irrevocably commits to purchase […***…] Batches.

6.4 Purchase Orders for Pilot Batches, Engineering Batches, Process Validation Batches and/or cGMP Batches.

6.4.1 With regard to the […***…] Batches referenced in Section 6.3.3: Customer shall, within […***…] days of the date of this Agreement place purchase orders binding on Customer for such Batches which it is obliged to purchase in accordance with Clause 6.3.3. Each binding purchase order shall be signed by Customer and shall authorise Lonza to manufacture such Batches of the Product as are set forth therein. Lonza shall promptly accept such purchase order and shall set forth an estimated Delivery date for each ordered Batch. For clarity, Clause 6.3.3 creates the legally binding commitment in respect of such […***…] Batches.

6.4.2 With regard to Batches in the Minimum Order: Customer shall within […***…] of first Approval in the first MO Year, and thereafter within each subsequent MO year, in each case at least […***…] prior to the Commencement Date of a Campaign place purchase orders binding on Customer for the number of Batches that comprises the Minimum Order for the applicable MO Year which it is obligated to purchase in accordance with Clause 6.3.1. Each binding purchase order shall be signed by Customer and shall authorise Lonza to manufacture such Batches of the Product as are set forth therein. Lonza shall promptly accept such purchase order and shall set forth an estimated Delivery date for each ordered Batch. For clarity, Clause 6.3.1 creates the legally binding commitment in respect of such Batches in the Minimum Order.

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6.4.3 With regard to any Additional Batches which Customer included in its Forecast and which Lonza indicated that, at the time of its Response it had capacity for at the Facility, Customer may place purchase orders and Lonza may (at its discretion), if at the time of receipt of such purchase order Lonza still has capacity at the Facility to manufacture such Additional Batches, accept such purchase order for such Additional Batches within […***…] business days of receipt. Lonza shall have no obligation to accept such purchase order. If Lonza accepts such purchase order, in its written confirmation of such purchase order for Additional Batches, Lonza shall set forth an estimated Delivery date for each ordered Batch and such confirmation shall create a legally binding commitment from both parties to manufacture, Deliver and purchase (as applicable) such Additional Batches. Any Delivery date set forth in Lonza's written confirmation of a purchase order or in any Project Plan shall be an estimated Delivery date.

6.4.4 All Batches shall be scheduled in a single Campaign in each calendar year unless otherwise agreed by Lonza and Customer. Any additional or inconsistent terms or conditions of any Customer purchase order, acknowledgement or similar standardized form given or received pursuant to this Agreement shall have no effect and such terms and conditions are hereby rejected.

6.5 Shortfall Notice. If at any time during any MO Year: (a) Lonza believes that […***…]; or (b) […***…] occurs, Lonza shall promptly provide written notice thereof to Customer, which notice shall include: (i) the number of Batches that Lonza believes it will be unable to Deliver; (ii) the reasons for Lonza's inability to Deliver such number of Batches; and (iii) Lonza's anticipated timeline for being able to Deliver such number of Batches (such notice, a "Shortfall Notice"). Following delivery of a Shortfall Notice, Lonza shall be obligated to provide written notice(s) to Customer promptly in the event there are subsequent changes in the details covered by a particular Shortfall Notice. For clarity, the provisions of this Clause 6.5 and Clause 6.6 and other provisions relating to mechanisms addressing Lonza's inability to deliver Batches set forth in purchase orders under this Agreement shall not limit or otherwise affect Lonza's obligations to continue efforts to manufacture and deliver Products in accordance with Clause 2.1.

6.6 Rescheduling. Lonza shall have the right to reschedule the start of any Batch or Campaign in any calendar year upon reasonable prior written notice to Customer (such notice to be sent to Customer as soon as reasonably practicable), provided that the rescheduled Commencement Date of such Batch or Campaign is no earlier or no later than […***…] days from the date originally estimated at the time of Lonza's acceptance of the purchase order. If the Customer requests to change the Commencement Date, Lonza will make all reasonable attempts to accommodate the request; provided, however, in the event that this change would impact other projects scheduled for occupancy in the designated suite or suites at the Facility, manufacture of the Customer's Batch or Campaign may be delayed until […***…]. Any such change requested by Customer may result in a reasonable rescheduling fee. Any delay requested by Customer of more than […***…] days shall be considered a cancellation pursuant to Clause 6.7.

6.7 Cancellation. If Customer cancels any Batch to which it is committed to purchase under Clause 6.3.1, 6.3.3 or 6.4.3 (whether in whole or in part) for any Engineering Batch, Process Validation Batches and/or cGMP Batches (whether such Batches are part of the Minimum Order or are Additional Batches) it shall pay Lonza […***…]% of the Batch Price for each such cancelled Batch (the "Cancelation Fee"). Such Cancellation Fee shall be payable within […***…] days following the written notice of cancellation associated with the cancelled Batch. In addition to the Cancellation Fee, the Customer shall pay for all costs associated with the cancelled Batch that Lonza has incurred, or is irrevocably committed to pay, including the costs of Raw Materials and the Raw Materials Fee, except as otherwise provided in Appendix A.

6.8 Replacement Product. Lonza will use reasonable efforts to secure a new project or additional batches under an existing project with a Third Party (excluding any batches with regard to which another customer is then under contractual obligation or binding purchase orders with Lonza to manufacture) for the cGMP manufacturing space and for the same dates and duration that would have been occupied by Customer, and then, in such case, the Cancellation Fee for a cancelled Batch that is replaced by a batch for the replacement project or expanded existing project shall be reduced by an amount equal to the production fees associated with such replacement batch.

6.9 Additional Work. In the event that the parties agree for any additional work to be added to the Project Plan ("Additional Work"), the prices for such Additional Work shall be calculated based on Lonza's standard pricing at the time of agreement of such Additional Work. Once the Additional Work has been added into this Agreement, the pricing for such Additional Work shall be subject to review in accordance with the provisions of Clause 8.8.

6.10 Process Change Requests. Lonza shall communicate the lock down dates by which any request process changes can be accepted under purchase orders, change orders or statements of work. Should changes be requested outside of the lock down date prior to a Campaign, Customer may present a request for an expedited consideration of the change. Lonza will use commercially reasonable efforts to evaluate, however, Lonza will retain the right to adhere to lock down dates.

## 7 Delivery and Acceptance

7.1 Delivery. All Product shall be delivered EXW (as defined by Incoterms® 2010) the Facility and Lonza shall deliver to Customer the Certificate of Analysis, the Certificate of Compliance and such other documentation as may be required by the Quality Agreement not later than the date of the EXW delivery of Batches (the "Delivery"). With respect to any Customer Materials, title and risk of loss shall remain with the Customer and shall not transfer to Lonza. With respect to Product, title and risk of loss shall transfer to Customer upon Delivery in accordance with this provision.

7.2 Storage. Customer shall arrange for shipment and take delivery of such Batch from the Facility, at Customer's expense, within […***…] days after Delivery or pay applicable storage costs. Lonza shall provide storage on a bill and hold basis for such Batch(es) at no charge for up to […***…] days; provided that any additional storage beyond […***…] days will be subject to availability and, if available, will be charged to Customer and will be subject to a separate agreement. In addition to Clause 8.5, Customer shall be responsible for all value

added tax (VAT) and any other applicable taxes, levies, import, duties and fees of whatever nature imposed as a result of any storage. Notwithstanding anything to the contrary contained in this Agreement, in no event shall Lonza be required to store any Batch for more than […***…] days after Delivery. Within […***…] days following a written request from Lonza, Customer shall provide Lonza with a letter in form satisfactory to Lonza confirming the bill and hold status of each stored Batch.

7.3 Acceptance/Rejection of Product.

7.3.1 Promptly following Delivery of cGMP Batches and Process Validation Batches (but not Pilot Batches or Engineering Batches), Customer shall inspect such Batches and shall have the right to test such Batches to determine compliance with the Specifications. Customer shall notify Lonza in writing of any rejection of a cGMP Batch or Process Validation Batch based on any claim that it fails to conform to cGMP and the Specifications or was not manufactured in accordance with the Quality Agreement within […***…] days of Delivery (the "Rejection Notice"), after which time all unrejected cGMP Batches or Process Validation Batches shall be deemed accepted; provided, however, that in the case of a Batch having a defect that causes a Batch to fail to comply with the Specifications and such defect is not discoverable upon reasonable physical inspection and testing performed pursuant to this Clause 7.3.1 but is discovered at a later time (e.g., in the course or as a result of long-term stability studies), but in any event within […***…] months of Delivery, Customer will have […***…] days from the discovery of such defect to provide a Rejection Notice to Lonza, in which case such Batch shall no longer be deemed accepted, provided always that the stability studies do not indicate that the Product would have degraded or deteriorated in any way within this period, in which case there would be no such right of rejection. Following receipt of a Rejection Notice, the Parties shall use their reasonable endeavours to reach a resolution, subject to Clause 7.3.2.

7.3.2 In the event that Lonza believes that a cGMP Batch or Process Validation Batch has been incorrectly rejected, Lonza may require that Customer provide to it cGMP Batch or Process Validation Batch samples for testing. Lonza may retain and test the samples of such cGMP Batch or Process Validation Batch. In the event of a discrepancy between Customer's and Lonza's test results such that Lonza's test results fall within the relevant Specifications, or there exists a dispute between the Parties over the extent to which such failure is attributable to a given Party, the Parties shall cause an independent laboratory promptly to review records, test data and perform comparative tests and/or analyses on samples of the Product that allegedly fails to conform to the Specifications. Such independent laboratory shall be mutually agreed upon by the Parties. The independent laboratory's results shall be in writing and shall be final and binding save for manifest error. Unless otherwise agreed to by the Parties in writing, the costs associated with such testing and review shall be borne by the Party against whom the independent laboratory rules.

7.3.3 In the event that it is determined (by the Parties or the independent laboratory) that any cGMP Batch or Process Validation Batch failed to conform with the Specifications or was not manufactured in accordance

with cGMP and the Quality Agreement (a "Failed Batch"), and such failure or non-conformity: (a) is primarily and materially attributable to Lonza's breach of its obligations hereunder or Lonza's negligence or intentional misconduct; or (b) results from a critical failure at the Facility or in the performance of the Manufacturing Process or the equipment used to manufacture Product which in each case, is primarily and materially attributable to Lonza's breach of its obligations hereunder or Lonza's negligence or intentional misconduct (collectively, "Lonza Responsibility"), or in the event any Engineering Batch fails to demonstrate the successful transfer of the Manufacturing Process to the Facility and such failure was primarily and materially attributable to Lonza's breach of its obligations hereunder or negligence in following the Manufacturing Process or other written instructions in cGMP documentation (a "Failed Engineering Batch"); then Lonza shall replace such Batch as promptly as practicable (subject always to Lonza's contractual commitments to Third Parties). Customer shall pay for such replacement Batch and the Raw Materials and Resins used therein (and any money Customer paid towards the Failed Batch or Failed Engineering Batch (including Raw Materials and Resins) shall be credited to the cost of the replacement Batch and related Raw Materials and Resins used in the replacement Batch). Customer acknowledges and agrees that, except in the case of Persistent Supply Failure (for which Customer shall have the rights and remedies expressly provided in this Agreement) and Lonza's indemnity obligations pursuant to Clause 12.1 its sole remedy with respect to a Failed Batch that is a Lonza Responsibility or a Failed Engineering Batch is as set forth in this Clause 7.3.3 (notwithstanding any remedies which would otherwise be available at law or in equity). Lonza shall not be responsible for the cost of Raw Materials or Customer Materials consumed in any Failed Batch or Failed Engineering Batch except to the extent set forth in this Clause 7.3.3.

7.3.4 Lonza shall investigate, and cooperate reasonably with Customer in investigating, any Failed Batch or Failed Engineering Batch. Lonza shall keep Customer informed of the status of any investigation and, upon completion of the investigation, shall provide Customer with a final written report describing the cause of the failure and summarizing the results of the investigation.

## 8 Price and Payment

8.1 Other Services. Pricing for the Services (other than the manufacture of Batches) provided by Lonza are set out in, and based on the assumptions and information set out in, the applicable Project Plan. In the event of changes to the Services based on Customer's request, Customer shall bear all additional costs. Lonza shall present such additional costs to Customer for approval prior to engaging in such modified Services.

8.2 Process Transfer and Validation, and Batches. In addition to the prices payable under Clause 8.1, Customer shall pay for the process transfer and process validation services, […***…] Batches (except as otherwise provided in this Agreement or the applicable Project Plan). The details of all of which are set out in Appendix A.

***Confidential Treatment Requested

8.3 Raw Materials, Resins, Raw Materials Fees and Safety Stock. In addition to the fee due under Clauses 8.1 and 8.2, Customer shall pay for all Raw Materials, Resins, Safety Stock and the Raw Materials Fee (except as otherwise provided in this Agreement). The Prices for all of which are set out in Appendix A.

8.4 Milestone Payment.

Customer shall pay a milestone payment of […***…] US Dollars ($[…***…]) on the first to occur of: (a) Approval of the Product; or (b) the Company's receipt of a complete response letter or non-approvability letter from the FDA or equivalent written communication from the EMA with respect to a biologics license application or marketing authorization application for the Product in which the FDA or EMA, as applicable, does not identify a deficiency related to the Facility, the Manufacturing Process, Process Validation Batches or the Services as a reason for not approving the biologics license application or marketing authorization application, as applicable.

8.5 Unless otherwise indicated in writing by Lonza, all Prices and charges are exclusive of value added tax (VAT) and of any other applicable taxes, levies, import, duties and fees of whatever nature imposed by or under the authority of any government or public authority and all such charges applicable to the Services shall be paid by Customer. When sending payment to Lonza, the Customer shall quote the relevant invoice number in its remittance advice.

8.6 Payment Terms.

8.6.1 Lonza shall issue all invoices to Customer for […***…] percent ([…***…]%) of the Price for Batches or Services upon commencement thereof and […***…] percent ([…***…]%) upon Delivery of applicable Batches or completion of applicable Services, unless otherwise stated in the Project Plan. If Lonza fails to Deliver a Batch or a Batch is canceled and Customer is not otherwise obligated to pay for such cancelled Batch pursuant to this Agreement, then Lonza shall promptly refund to Customer any portion of the Price for such Batches that Customer previously paid.

8.6.2 Charges for Raw Materials (including media and feeds) and the Raw Materials Fee for each Batch shall be invoiced […***…] percent ([…***…]%) upon the Delivery of each Batch. Charges for Resins and membranes with no handling fee thereon shall be invoiced by Lonza upon placement of purchase orders for such Resins and membranes, media and feeds by Lonza. The price of the Safety Stock and the Raw Materials Fee in respect thereof shall be invoiced on use of such safety stock or upon its expiry. Charges for external testing shall be invoiced on Delivery.

8.6.3 All invoices are strictly net and payment must be made within […***…] days of the date of invoice. Notwithstanding the foregoing, if any portion of an invoice is the subject of a bona fide dispute, then Customer shall pay the undisputed amounts and the Parties shall use good-faith efforts to reconcile the disputed amount as soon as practicable. Lonza shall not suspend performance of the Services or delivery of Product or seek to terminate this Agreement on account of non-payment of any invoiced amount that is the subject of a good-faith dispute; provided that Customer timely pays all non-disputed amounts. Payment shall be made without deduction, deferment, set-off, lien or counterclaim except

as set forth above with respect to disputed amounts.

8.7 If Customer is in default of payment of any undisputed invoice on the due date, interest shall accrue on any amount overdue at the lesser of: (i) the rate of […***…] percent ([…***…]%) per month […***…]; or (ii) the maximum rate allowable by applicable law, interest to accrue on a day to day basis until full payment; and Lonza shall, at its sole discretion, and without prejudice to any other of its accrued rights, be entitled to suspend the provision of the Services and/or delivery of Product until all overdue amounts have been paid in full including interest for late payments.

8.8 Price adjustments

8.8.1 With effect from […***…], and not more than […***…] per […***…], Lonza may adjust the Price in accordance with the […***…] Index […***…] (or any successor index) increase for the previous calendar year. The new Price reflecting such Price adjustment shall be effective for any Services and/or Batches for which a binding purchase order is entered into by Customer after the date of Lonza's notice to Customer of the Price adjustment.

8.8.2 In addition to the above, the Price may be changed by Lonza with respect to any Batches for which Customer has not yet delivered a purchase order, upon reasonable prior written notice to Customer (providing reasonable detail in support thereof), to reflect any material change in an environmental, safety or regulatory standard that substantially impacts Lonza's cost and ability to perform the Services and Lonza shall use reasonable endeavours to provide any additional information regarding such changes reasonably requested by Customer.

## 9 Capital Equipment

Any Capital Equipment required for the performance of the Services shall be acquired on terms to be agreed by the Parties prior to commencement of the relevant Services.

## 10 Intellectual Property

10.1 Except as expressly otherwise provided herein, neither Party will, as a result of this Agreement, acquire any right, title, or interest in any Background Intellectual Property of the other Party or any of its Affiliates.

10.2 Subject to Clause 10.3, Customer shall own all right, title, and interest in and to any and all: (a) Intellectual Property that Lonza and/or its Affiliates, the External Laboratories or other contractors or agents of Lonza develops, conceives, invents, first reduces to practice or makes, solely or jointly with Customer or others, to the extent that it: (i) is a direct derivative of or improvement to, or uses or incorporates, Customer Information and/or Customer Background Intellectual Property; and (ii) is severable from, and does not utilise, disclose or reveal any Lonza Background Intellectual Property and/or Lonza Information; and (b) information and documentation developed by Lonza and/or its Affiliates, the External Laboratories or other contractors or agents of Lonza during the course of performing the Services to the extent that it: (i) relates specifically to the TRC-105 molecule or the Product; and (ii) is severable from, and does not disclose or

reveal, any Lonza Background Intellectual Property (such new Customer Intellectual Property, information and documentation, collectively being the "New Customer Intellectual Property"). For the avoidance of doubt, "New Customer Intellectual Property" shall include any material, processes or other items to the extent that they embody, or are claimed or covered by, any of the foregoing Intellectual Property, data within batch release documentation, comparability data, structure elucidation data, stability data, results of viral clearance testing, and results of cell bank testing, but excluding any New General Application Intellectual Property.

10.3 Notwithstanding Clause 10.2, and subject to the license granted in Clause 10.5, Lonza shall own all right, title and interest in Intellectual Property that Lonza and/or its Affiliates, the External Laboratories or other contractors or agents of Lonza, solely or jointly with Customer, develops, conceives, invents, or first reduces to practice or makes in the course of performance of the Services to the extent that it: (i) is generally applicable to the development or manufacture of chemical or biological products or product components; or (ii) is an improvement of, or direct derivative of, any Lonza Background Intellectual Property and/or Lonza Information (collectively the "New General Application Intellectual Property"). For avoidance of doubt, "New General Application Intellectual Property" shall include any material, processes or other items that embody, or that are claimed or covered by, any of the foregoing Intellectual Property.

10.4 Lonza hereby assigns to Customer all of its right, title and interest in any New Customer Intellectual Property. Lonza shall execute, and shall require its personnel as well as its Affiliates, External Laboratories or other contractors or agents and their personnel involved in the performance of the Services to execute, any documents reasonably required to confirm Customer's ownership of the New Customer Intellectual Property, and any documents required to apply for, maintain and enforce any patent or other right in the New Customer Intellectual Property.

10.5 Subject to the terms and conditions set forth herein (including the payment of the Price as required above), Lonza hereby grants to Customer a non-exclusive, world-wide, fully paid-up, irrevocable, transferable license, including the right to grant sublicenses, under the New General Application Intellectual Property, to use, sell and import the Product manufactured under this Agreement (but no other product).

10.6 Customer hereby grants Lonza and its Affiliates the non-exclusive right to use the Customer Information, Customer Background Intellectual Property, Customer Materials, New Customer Intellectual Property, the Cell Line, and any and all other intellectual property supplied by or on behalf of the Customer, during the Term solely for the purpose of fulfilling its obligations under this Agreement.

10.7 Provided that Customer is not in breach of any of its obligations under this Agreement and further provided Lonza has not terminated this Agreement pursuant to Clauses 14.2.3 and/or 14.2.4, Customer will have the right to transfer the Manufacturing Process to itself (provided that if Customer assigns this Agreement to a Third Party pursuant to Clause 16.2, such Third Party's / assignee's right to request a transfer of the Manufacturing Process to itself or a Third Party of such assignee shall be subject to Lonza's prior written consent, and such Third Party / assignee shall not have an automatic right to such a transfer) and/or any Third Party approved in writing by Lonza operating at such location approved by Lonza (provided that Lonza shall approve a requested

transfer to any Third Party or Affiliate thereof listed on Appendix C and shall not unreasonably withhold consent for a requested transfer to any other Third Party or Affiliate thereof with a principal place of business outside of the restricted territories listed on Appendix C), It is agreed between the Parties that Lonza shall be considered to be reasonably withholding its consent if it […***…] on the basis that such transfer shall be for the manufacture of that Product (and no other product); provided, however, to the extent such technology transfer includes Lonza Confidential Information, Lonza Background Intellectual Property, or New General Application Intellectual Property (which shall at all times remain the sole and absolute property of Lonza), such technology transfer shall be subject to a reasonable one-time licensing fee (a "Technology Fee") and reasonable terms (both to be agreed upon by the Parties), subject to the following:

10.7.1 If a Technology Fee is applicable, the amount shall not be greater than $[…***…]. For the avoidance of doubt, the fee referred to in this Clause 10.7 shall be in addition to the fees and royalties due under the terms of any license for Lonza's GS system.

10.7.2 If there has been a […***…], or if such transfer of the Manufacturing Process is in connection with a […***…], then no Technology Fee shall be due.

10.7.3 For the avoidance of doubt, Customer may, in its sole discretion, elect not to have transferred or disclosed to it any Lonza Confidential Information, Lonza Background Intellectual Property and New General Application Intellectual Property, in which case Customer's sole payment obligation with respect to exercise of its technology transfer right under this Clause 10.7 shall be as set forth in Clause 10.10.

10.8 Should Customer wish to sub-licence any or all of the Lonza Confidential Information, Lonza Background Intellectual Property or New General Application Intellectual Property to any Third Party that is not in connection with a transfer under Clause 10.7, Customer shall obtain Lonza's prior written consent (not to be unreasonably withheld) to such sub-licensing.

10.9 Lonza shall not introduce into the Manufacturing Process any royalty-bearing Intellectual Property or Intellectual Property requiring other payments for license without the prior written consent of Customer.

10.10 If Customer exercises its technology transfer right under Clause 10.7, Lonza shall provide reasonably necessary services and documents to complete such technology transfer as promptly as practical, and Customer shall reimburse Lonza for any reasonable costs (based on a full-time employee rate for such support) and expenses incurred in providing such services and documents, subject to Clause 10.7.

## 11 Warranties

11.1 Lonza warrants that:

11.1.1 the Services shall be performed in accordance with all Applicable Laws

and in a workmanlike manner consistent with industry standards;

11.1.2 except with respect to any development services, Pilot Batches and/or Engineering Batches, the manufacture of Product shall be performed in accordance with cGMP and will meet the Specifications at the date of Delivery;

11.1.3 all Product delivered by Lonza hereunder shall: (a) conform to the applicable Specifications at the date of Delivery; (b) be manufactured and delivered in accordance with the Quality Agreement and cGMP; (c) not be adulterated within the meaning of the United States Food, Drug and Cosmetic Act, as amended, and any regulations promulgated thereunder; and (d) be free and clear of any lien, encumbrance; provided, however, that this warranty shall not apply in respect of any Pilot Batch or Engineering Batch;

11.1.4 it has not been debarred by the FDA pursuant to 21 U.S.C. § 335a or its successor provisions;

11.1.5 to the best of its reasonable ability and knowledge it will not use in the performance of Services hereunder, any personnel, Affiliate or Third Party that has been debarred by the FDA pursuant to 21 U.S.C. § 335a or its successor provisions;

11.1.6 it will not use or disclose any Customer Information or Customer Background Intellectual Property in violation of its obligations under this Agreement;

11.1.7 as of the date of this Agreement, to the best of Lonza's knowledge and belief, the Lonza Confidential Information and Lonza Background Intellectual Property are owned by Lonza or Lonza is otherwise entitled to use them for the purposes of providing Services under this Agreement and, during the Term of this Agreement, Lonza shall not do or cause anything to be done which would adversely affect its ownership or entitlement to use Lonza Confidential Information, Lonza Background Intellectual Property or New General Application Intellectual Property for the purposes of providing Services under this Agreement;

11.1.8 as of the date of this Agreement, to the best of Lonza's knowledge and belief, the use by Lonza of those parts of the Manufacturing Process that constitute Lonza Background Intellectual Property (excluding any modifications or steps made or developed by Customer the Customer Materials, Customer Information and Customer Background Intellectual Property) and Lonza Confidential Information for the performance of the Services as provided herein will not infringe any rights (including without limitation any intellectual or industrial property rights) vested in any Third Party;

11.1.9 Lonza will notify Customer in writing immediately if it receives or is notified of a claim from a Third Party that the use by Lonza of the Manufacturing Process and/or the Lonza Confidential Information, Lonza Background Intellectual Property or New General Application Intellectual Property for performance of the Services infringes any Intellectual Property rights vested in such Third Party;

11.1.10 it or its Affiliate holds all necessary permits, approvals, consents and licenses to enable it to perform the Services at the Facility (subject always to Clause 11.2.3); and

11.1.11 it has the necessary corporate authorizations to enter into and perform this Agreement.

11.2 Customer warrants that:

11.2.1 To the best of Customer's knowledge as of the Effective Date, Customer has all the rights necessary to permit Lonza (and its relevant Affiliates) to perform the Services without infringing the Intellectual Property rights of any Third Party and the performance of the Services shall not infringe any Third Party Intellectual Property rights;

11.2.2 Customer will promptly notify Lonza in writing if it receives or is notified of a formal written claim from a Third Party that Customer Information, Customer Background Intellectual Property, Customer Materials, New Customer Intellectual Property, the Cell Line, and/or any and all other information, materials and Intellectual Property supplied by or on behalf of the Customer, or that the use by Lonza thereof for the provision of the Services infringes any Intellectual Property or other rights of any Third Party;

11.2.3 Customer has all the rights necessary to provide, and permit Lonza and its Affiliates and any Lonza sub-contractors and the External Laboratories to use for the purposes of this Agreement, the Customer Information, Customer Background Intellectual Property, Customer Materials, New Customer Intellectual Property, the Cell Line, and any and all other information, materials and Intellectual Property supplied by or on behalf of the Customer, and that the use of anything referred to in this clause 11.2.3 will not infringe the Intellectual Property rights of any Third Party; and

11.2.4 Customer has the necessary corporate authorizations to enter into this Agreement.

11.3 DISCLAIMER: THE WARRANTIES EXPRESSLY SET FORTH IN THIS AGREEMENT ARE IN LIEU OF ALL OTHER WARRANTIES, AND ALL OTHER WARRANTIES, BOTH EXPRESS AND IMPLIED, ARE EXPRESSLY DISCLAIMED, INCLUDING WITHOUT LIMITATION ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

## 12 Indemnification and Liability

12.1 Indemnification by Lonza. Lonza shall indemnify the Customer, its Affiliates, and their respective officers, employees and agents ("Customer Indemnitees") for any loss, damage, costs, liability and expenses (including reasonable attorney fees) that Customer Indemnitees may suffer as a result of any Third Party claim arising directly out of: (i) any material breach of the warranties given in this Agreement by Lonza; (ii) any claims alleging that the Services (excluding use by Lonza, Lonza's Affiliates, contractors or the External Labs of the Cell Line, Customer Information, Customer Background Intellectual Property, Customer Materials, New Customer Intellectual Property, and/or any and all information, materials and other Intellectual Property supplied by or on behalf of the

Customer) infringe any Intellectual Property rights of a Third Party; and/or (iii) Lonza's negligence or intentional misconduct; except, in each case, to the extent that such claims resulted from the negligence, intentional misconduct or breach of this Agreement by any Customer Indemnitees.

12.2 Indemnification by Customer. Customer shall indemnify Lonza, its Affiliates, and their respective officers, employees and agents ("Lonza Indemnitees") from and against any loss, damage, costs, liability and expenses (including reasonable attorney fees) that any Lonza Indemnitees may suffer as a result of any Third Party claim arising directly out of: (i) any material breach of warranties given in this Agreement by Customer; (ii) the manufacture, use, sale, or distribution of any Product, including any claims of product liability; (iii) any claims alleging that the use by Lonza, any of Lonza's Affiliates, any Lonza sub-contractors, any External Laboratory or any Third Party of the Cell Line, Customer Information, Customer Background Intellectual Property, Customer Materials, New Customer Intellectual Property, and/or any and all information, materials and other Intellectual Property supplied by or on behalf of the Customer, for the purposes of this Agreement, infringes any Intellectual Property rights of Third Parties; and/or (iv) Customer's negligence or intentional misconduct; except, in each case, to the extent that such claims resulted from the negligence, intentional misconduct or breach of this Agreement by any Lonza Indemnitees.

12.3 Indemnification Procedure. If the Party to be indemnified intends to claim indemnification under this Clause 12, it shall promptly notify the indemnifying Party in writing of such claim. The indemnitor shall have the right to control the defense and/or settlement thereof; provided, however, that any indemnitee shall have the right to retain its own counsel at its own expense. The indemnitee shall not settle any indemnifiable claim without the prior written consent of the indemnitor, such consent not to be unreasonably withheld. The indemnitee, its employees and agents, shall reasonably cooperate with the indemnitor (at the expense of the indemnitor) in the investigation of any liability covered by this Clause 12. The failure to deliver prompt written notice to the indemnitor of any claim, solely to the extent prejudicial to its ability to defend such claim, shall relieve the indemnitor of any obligation to the indemnitee under this Clause 12.

12.4 DISCLAIMER OF CERTAIN DAMAGES. SUBJECT ALWAYS TO CLAUSE 12.6, IN NO EVENT SHALL EITHER PARTY OR ANY OF ITS AFFILIATES BE LIABLE TO THE OTHER PARTY AND/OR ANY OF THE OTHER PARTY'S AFFILIATES AND/OR ANY OF THE OTHER PARTY'S INDEMNITEES (IN EACH CASE WHETHER IN CONTRACT, TORT, NEGLIGENCE, BREACH OF STATUTORY DUTY, UNDER ANY INDEMNITY OR OTHERWISE HOWSOEVER ARISING) FOR ANY LOSS OF PROFITS, LOSS OF REVENUES, LOSS OF GOODWILL, LOSS OF REPUTATION, OR FOR ANY INCIDENTAL, INDIRECT, SPECIAL, PUNITIVE OR CONSEQUENTIAL LOSSES, COSTS, EXPENSES OR DAMAGES, ARISING FROM OR RELATED TO THIS AGREEMENT.

12.5 LIMITATION OF LIABILITY. SUBJECT ALWAYS TO CLAUSE 12.6, THE AGGREGATE LIABILITY OF LONZA AND ITS AFFILIATES WITH RESPECT TO ANY CLAIM OR RELATED SET OF CLAIMS UNDER OR IN RELATION TO THIS AGREEMENT (WHETHER IN CONTRACT, TORT, NEGLIGENCE, BREACH OF STATUTORY DUTY, UNDER ANY INDEMNITY OR OTHERWISE HOWSOEVER ARISING) SHALL NOT EXCEED, IN THE AGGREGATE, […***…] IN THE […***…] PERIOD OF THIS AGREEMENT PRIOR TO THE APPLICABLE

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CLAIM, LESS ANY AMOUNT PREVIOUSLY PAID BY LONZA WITH RESPECT TO LIABILITY CLAIMS. THE FOREGOING SENTENCE SHALL NOT APPLY TO ANY CLAIM OR RELATED SET OF CLAIMS WHICH LONZA IS OBLIGED TO INDEMNIFY CUSTOMER FROM IN ACCORDANCE WITH CLAUSE […***…]. THE AGGREGATE LIABILITY OF LONZA AND ITS AFFILIATES WITH RESPECT TO ANY CLAIM OR RELATED SET OF CLAIMS WHICH LONZA IS OBLIGED TO INDEMNIFY CUSTOMER FROM IN ACCORDANCE WITH CLAUSE […***…] AND THE AGGREGATE LIABILITY OF CUSTOMER AND ITS AFFILIATES WITH RESPECT TO ANY CLAIM OR RELATED SET OF CLAIMS WHICH CUSTOMER IS OBLIGED TO INDEMNIFY LONZA FROM IN ACCORDANCE WITH CLAUSE […***…] SHALL NOT EXCEED, IN EACH INSTANCE, […***…] IN THE […***…] PERIOD OF THIS AGREEMENT PRIOR TO SUCH INDEMNITY CLAIM, LESS ANY AMOUNT PREVOUSLY PAID BY THE APPLICABLE PARTY WITH RESPECT TO SUCH INDEMNITY CLAIMS.

12.6 NOTHING IN THIS AGREEMENT SHALL OPERATE SO AS TO EXCLUDE OR IN ANY WAY LIMIT ANY LIABILITY FOR FRAUD, OR FOR DEATH OR PERSONAL INJURY, OR TO THE EXTENT RESULTING FROM GROSS NEGLIGENCE OR INTENTIONAL MISCONDUCT, A BREACH OF CONFIDENTIALITY, OR FOR ANY OTHER LIABILITY THAT MAY NOT BE EXCLUDED OR LIMITED AS A MATTER OF APPLICABLE LAW. NOTHING IN THIS AGREEMENT SHALL EXCLUDE OR LIMIT CUSTOMER'S LIABILITY TO PAY INVOICES AND/OR CANCELLATION FEES EXCEPT AS EXPRESSLY PROVIDED IN CLAUSES 14.3.3, 14.3.5 AND 14.3.6.

**13 Confidentiality**

13.1 A Party receiving Confidential Information (the "Receiving Party") agrees to strictly keep secret any and all Confidential Information received during the Term from or on behalf of the other Party (the "Disclosing Party") as well as the terms of this Agreement using at least the same level of measures as it uses to protect its own Confidential Information, but in any case at least commercially reasonable and customary efforts. Confidential Information shall include information disclosed in any form including but not limited to in writing, orally, graphically or in electronic or other form to the Receiving Party, observed by the Receiving Party or its employees, agents, consultants, or representatives, or otherwise learned by the Receiving Party under this Agreement, which the Receiving Party knows or reasonably should know is confidential or proprietary. For clarity, all "Customer Information" disclosed or made available by or on behalf of one Party to the other Party or any of its Affiliates or representatives shall be deemed the Confidential Information of Customer for purposes of this Agreement and all "Lonza Information," disclosed or made available by or on behalf of one Party to the other Party or any of its Affiliates or representatives shall be deemed the Confidential Information of Lonza for purposes of this Agreement.

13.2 Notwithstanding the foregoing, Receiving Party may disclose to any courts and/or other authorities Confidential Information which is or will be required pursuant to applicable governmental or administrative or public law, rule, regulation or order, including, without limitation requirements of the Securities and Exchange Commission or any national securities exchange on which a Party's equity securities are traded. In such case the Party that received the Confidential Information will, to the extent legally permitted, inform the other

Party promptly in writing and reasonably cooperate with the Disclosing Party in seeking to minimize the extent of Confidential Information which is required to be disclosed to the courts and/or authorities.

13.3 In the case of Customer as the Receiving Party: (a) Customer may disclose the terms of this Agreement to actual and prospective Third Party licensees, collaborators, acquirers, investors and strategic partners who: (i) have been informed of the confidential nature of such terms; (ii) have a need to know such terms; and (iii) are bound by confidentiality and non-use obligations no less stringent than those set forth herein; and (b) Lonza will not unreasonably withhold its consent to Customer's disclosure of other Confidential Information as is reasonably required for (i) actual and prospective Third Party licensees, collaborators, acquirers, investors and strategic partners to conduct due diligence evaluations of Customer and TRC105 (provided that Customer complies with clauses (a)(i) – (iii) above), or (ii) regulatory filings related to the Product, including a biologics license application or marketing authorization application.

13.4 The obligation to maintain confidentiality under this Agreement does not apply to Confidential Information, which:

13.4.1 at the time of disclosure was publicly available;

13.4.2 is or becomes publicly available other than as a result of a breach of this Agreement by the Receiving Party;

13.4.3 the Receiving Party can establish by competent proof, was rightfully in its possession at the time of disclosure by the Disclosing Party and had not been received from or on behalf of Disclosing Party (or anyone for whom it is responsible);

13.4.4 is supplied to a Party by a Third Party which was not in breach of an obligation of confidentiality to Disclosing Party or any other party; or

13.4.5 is developed by the Receiving Party independently from and without use of the Confidential Information, as evidenced by contemporaneous written records.

13.5 The Receiving Party will use Confidential Information of the Disclosing Party only for the purposes of this Agreement and will not make any use of the Confidential Information for its own separate benefit or the benefit of any Third Party including, without limitation, with respect to research or product development or any reverse engineering or similar testing. The Receiving Party agrees to return or destroy, as directed by Disclosing Party, promptly (and certify such destruction) on Disclosing Party's request, or upon expiration or termination of this Agreement, all written or tangible Confidential Information of the Disclosing Party, except that one copy of such Confidential Information may be kept by the Receiving Party in its confidential files for record keeping purposes only, provided that during the period of such retention the confidentiality obligations in Clause 13 shall continue to apply.

13.6 Each Party will restrict the disclosure of the other Party's Confidential Information to such officers, employees, consultants and representatives of itself and its Affiliates who have been informed of the confidential nature of the Confidential Information and who have a need to know such Confidential Information for the

purpose of this Agreement. Prior to disclosure to such persons, the Receiving Party shall bind its and its Affiliates' officers, employees, consultants and representatives to confidentiality and non-use obligations no less stringent than those set forth herein. The Receiving Party shall notify the Disclosing Party as promptly as practicable of any unauthorized use or disclosure of the Confidential Information. Lonza may disclose the Customer's Confidential Information to Lonza's Affiliates, contractors and the External Laboratories, in each case to the extent reasonably necessary for Lonza to perform the Services under this Agreement.

13.7 The Receiving Party shall at all times be fully liable for any and all breaches of the confidentiality obligations in this Clause 13 by any of its Affiliates or subcontractors or the employees, consultants and representatives of itself or its Affiliates or subcontractors, or by any other third party to which it is permitted to disclose the other Party's Confidential Information.

13.8 Each Party hereto expressly agrees that any breach or threatened breach of the undertakings of confidentiality provided under this Clause 13 by a Party may cause irreparable harm to the other Party and that money damages may not provide a sufficient remedy to the non-breaching Party for any breach or threatened breach. In the event of any breach and/or threatened breach, then, in addition to all other remedies available at law or in equity, the non-breaching Party shall be entitled to seek injunctive relief and any other relief deemed appropriate by the non-breaching Party.

**14 Term and Termination**

14.1 Term. This Agreement shall commence on the Effective Date and shall end on the seventh ($7^{th}$) anniversary of the date of first Approval unless terminated earlier as provided herein or extended by mutual written consent of the Parties (the "Term"). The Term may be extended on the written agreement of the Parties for a further three (3) years, provided such extension shall be made no later than the fifth anniversary of the date of first Approval.

14.2 Termination. This Agreement may be terminated as follows:

14.2.1 before first Approval, Customer shall have the right to terminate this Agreement upon sixty (60) days' written notice to Lonza in the event that: (a) Customer receives a complete response letter from a Governmental Authority indicating that Customer's application for approval to market the Product cannot be approved and a Customer Withdrawal subsequently occurs; or (b) a Customer Withdrawal occurs;

14.2.2 after first Approval, Customer shall have the right to terminate this Agreement upon sixty (60) days' written notice to Lonza in the event that: (a) Approval is withdrawn by a Governmental Authority and a Customer Withdrawal subsequently occurs; or (b) a Customer Withdrawal occurs;

14.2.3 by either Party if the other Party commits a material breach of this Agreement and fails to cure such breach to the reasonable satisfaction of the non-breaching Party within thirty (30) days (or ten (10) days for non-payment or amounts not subject to good-faith dispute) following written notification of such breach from the non-breaching party to the breaching party; provided, however, that such thirty (30) day period

shall be extended as agreed by the Parties if the identified breach is incapable of cure within thirty (30) days but is curable within sixty (60) days and if the breaching Party provides a plan and timeline to cure the breach, promptly commences efforts to cure the breach and diligently prosecutes such cure (it being understood that this extended period shall be unavailable for any breach regarding non-payment), or by Customer in the event of a Persistent Supply Failure;

14.2.4 by either Party, immediately, if the other Party enters into administration, becomes insolvent, is dissolved or liquidated, makes a general assignment for the benefit of its creditors, or files or has filed against it, a petition in bankruptcy or has an administrator or receiver appointed for a substantial part of its assets;

14.2.5 by either Party pursuant to Clause 15; or

14.2.6 by either Party prior to the execution of the initial Project Plan if, despite good faith efforts to agree on the initial Project Plan, the Parties have not agreed on the initial Project Plan within ninety (90) days of the Effective Date; provided, however, that such ninety (90) day period may be extended upon mutual agreement of the Parties.

14.3 Consequences of Termination.

In the event of termination hereunder:

14.3.1 Under any right of termination set out in this Agreement: all Batches shall be deemed to have been cancelled, except pursuant to Clause 14.3.3, all obligations of Customer to purchase Batches shall be terminated (subject to the termination fees set forth in this Clause 14.3) and Lonza shall be compensated for:

(a) all Services and Batches rendered up to the date of termination, including in respect of any Product in-process;

(b) all costs incurred through the date of termination, including Raw Materials costs and Raw Materials Fees for Raw Materials used or purchased for use in connection with the Project Plan, except as otherwise provided in Appendix A; and

(c) all unreimbursed Capital Equipment and related decommissioning charges incurred pursuant to Clause 9, solely to the extent agreed to by the Company as part of the acquisition of Capital Equipment.

14.3.2 Additional Consequences for Termination by Lonza pursuant to Clauses 14.2.3 or 14.2.4: in the event of termination by Lonza pursuant to Clauses 14.2.3 or 14.2.4, then in addition to Clause 14.3.1, all binding purchase orders shall be deemed cancelled and Customer shall pay a Cancellation Fee of […***…]% in respect thereof, and Customer shall pay for all Minimum Orders for which it would have been required to submit purchase orders during the MO Year in which termination occurs (if such purchase orders have not already been submitted for such MO Year) and all Minimum Orders for which it would have been required to submit purchase orders during either […***…]; provided, that

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Lonza shall use reasonable efforts to secure a new project or additional batches under an existing project with a Third Party (excluding any batches with regard to which another customer is then under contractual obligation or binding purchase orders with Lonza to manufacture) for the cGMP manufacturing space and for the period for which Customer is obligated to pay for Minimum Orders under this Clause 14.3.2, and then, in such case, the termination fees due under this Clause 14.3.2 that is replaced by a batch for the replacement project or expanded existing project shall be reduced by an amount equal to the production fees associated with such replacement batch.

14.3.3 Additional Consequences for Termination by Customer pursuant to Clause 14.2.3 or 14.2.4 or by either Party pursuant to Clause 14.2.5: in the event of termination by Customer in accordance with Clause 14.2.3 or 14.2.4 then in addition to Clause 14.3.1, Customer shall have the option to cancel without any Cancellation Fee any or all binding purchase orders then in effect or to continue with any or all binding purchase orders then in effect, in which case Customer shall be obligated to purchase and Lonza shall be obligated to Deliver such non-cancelled Batches pursuant to the terms of this Agreement. In the event of termination by either Party in accordance with Clause 14.2.5, all binding purchase orders then in effect shall be cancelled without any Cancellation Fee.

14.3.4 Additional Consequences for Termination pursuant to Clause 14.2.1 In the event of Customer's termination of this Agreement pursuant to Clause 14.2.1, then all binding purchase orders shall be deemed cancelled and Customer shall pay a Cancellation Fee of […***…]% in respect of binding purchase orders to the extent the manufacture thereof was scheduled to commence within […***…] months of the termination of this Agreement.

14.3.5 Additional Consequences for Termination pursuant to Clause 14.2.2. In the event of Customer's termination of this Agreement pursuant to Clause 14.2.2, then all binding purchase orders shall be deemed cancelled and in lieu of any Cancellation Fee in respect thereof (Clause 6.7 notwithstanding), Customer shall pay an amount equal to the aggregate purchase price of Batches constituting the Minimum Order for […***…].

14.3.6 Additional Consequences for Termination by either Party pursuant to Clause 14.2.6: In the event this Agreement is terminated by either Party pursuant to Clause 14.2.6 and, Clause 6.7 notwithstanding, no Cancellation Fees shall be owed by Customer.

14.4 Survival. The rights and obligations of each Party which by their nature survive the termination or expiration of this Agreement shall survive the termination or expiration of this Agreement, including Clauses 5, 10-14 (inclusive) and 16 (to the extent relevant).

## 15 Force Majeure

15.1 If Lonza is prevented or delayed in the performance of any of its obligations under the Agreement by Force Majeure and gives written notice thereof to Customer specifying the matters constituting Force Majeure together with such

evidence as Lonza reasonably can give and specifying the period for which it is estimated that such prevention or delay will continue, Lonza shall be excused from the performance or punctual performance of such obligations as the case may be from the date of such notice for so long as such cause of prevention or delay shall continue; provided that Lonza uses commercially reasonable efforts to cure or mitigate such Force Majeure and the effects thereof throughout such time. If such Force Majeure persists for a period of […***…] months or more, either Party may terminate this Agreement by delivering written notice to the other.

15.2 "Force Majeure" shall be deemed to include any reason or cause beyond Lonza's reasonable control affecting the performance by Lonza of its obligations under the Agreement, including, but not limited to, any cause arising from or attributable to acts of God, strike, lockouts, labor troubles, restrictive governmental orders or decrees, riots, insurrection, war, terrorists acts, or the inability of Lonza to obtain any required raw material, energy source, equipment, labour or transportation due to a general shortage of such materials, energy, equipment, labor or transportation or an inability to obtain them at reasonable commercial terms.

15.3 With regard to Lonza, any such event of Force Majeure affecting services or production at its Affiliates or suppliers shall be regarded as an event of Force Majeure.

**16 Miscellaneous**

16.1 Severability. If any provision hereof is or becomes at any time illegal, invalid or unenforceable in any respect, neither the legality, validity nor enforceability of the remaining provisions hereof shall in any way be affected or impaired thereby. The Parties hereto undertake to substitute any illegal, invalid or unenforceable provision by a provision which is as far as possible commercially equivalent considering the legal interests and the purpose.

16.2 Amendments/Assignment. Modifications and/or amendments of this Agreement must be in writing and signed by the Parties. Lonza shall be entitled to instruct one or more of its Affiliates to perform any of Lonza's obligations contained in this Agreement, but Lonza shall remain fully responsible in respect of those obligations. Subject thereto, neither Party may assign its interest under this Agreement without the prior written consent of the other Party, such consent not to be unreasonably withheld, conditioned or delayed, provided, however that: (a) Lonza may assign this Agreement to: (i) any Affiliate of Lonza (provided that such Affiliate is of sufficient financial standing to be able to meet its obligations under the Agreement); or (ii) any Third Party in connection with the sale or transfer (by whatever method) of all or substantially all of the assets of the business related to the Facility or providing the Services, provided, in each case, that Lonza sells, transfers or otherwise provides all necessary licenses and Intellectual Property to such assignee to allow such assignee to perform under this Agreement; (b) Customer may assign this Agreement to any Third Party (provided that such Third Party is not less credit-worthy than Customer and is not engaged primarily in the business of manufacturing pharmaceutical or biological products on a contract basis) in connection with the sale or transfer (by whatever method) of all or substantially all of the assets of Customer, a merger, consolidation or acquisition of the Customer, or a sale or transfer of, or grant of an exclusive license for, all or substantially all of the line of business or Product to which this Agreement relates; and (c) Lonza shall be entitled to sell, assign

and/or transfer its trade receivables resulting from this Agreement without the consent of the Customer. For purposes of this Clause 16.2, the terms "assign" and "assignment" shall include, without limitation: (i) the sale of fifty percent (50%) or more of the outstanding stock of such Party to an Affiliate of such Party or an unrelated entity or natural person; (ii) the sale or transfer or other assignment of all or substantially all of the assets of the Party or the line of business or Product to which this Agreement relates; and (iii) a merger, consolidation, acquisition or other form of business combination. Any purported assignment without a required consent shall be void. No assignment shall relieve any Party of responsibility for the performance of any obligation that accrued prior to the effective date of such assignment. This Agreement shall be binding on the successors and permitted assignees of each Party.

16.3 Notice. All notices must be written and sent to the address of the Party first set forth above or to such other address as either Party may designate hereafter by written notice to the other Party. All notices must be given: (a) by personal delivery, with receipt acknowledged; (b) by facsimile followed by hard copy delivered by the methods under (c) or (d); (c) by prepaid certified or registered mail, return receipt requested; or (d) by prepaid recognized next business day delivery service. Notices will be effective upon receipt or at a later date stated in the notice.

16.4 Governing Law/Jurisdiction. This Agreement is governed in all respects by the laws of the State of New York, without regard to its conflicts of laws principles. The Parties agree to submit to the jurisdiction of the courts of New York.

16.5 Third Parties. No Third Parties shall have the right to enforce any of the provisions of this Agreement or be beneficiaries of this Agreement of either Party's rights or obligations hereunder, save that Affiliates of Lonza and Affiliates of Customer respectively may rely on the indemnities granted to them and limitations and exclusions of liability contained herein. The Parties may amend this Agreement without the consent of the Affiliates of either Party.

16.6 Announcements / Press Releases. Neither Party shall make any press release or announcement regarding the subject matter of this Agreement without the prior written consent of the other. On execution of this Agreement the Parties may issue a joint press release regarding the entry into this Agreement.

16.7 Entire Agreement. This Agreement contains the entire agreement between the Parties as to the subject matter hereof and supersedes all prior and contemporaneous agreements with respect to the subject matter hereof. This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original, and all of which together shall constitute one and the same document. Each Party acknowledges that an original signature or a copy thereof transmitted by facsimile or by .pdf shall constitute an original signature for purposes of this Agreement.

16.8 Independent Contractors. Each Party is an independent contractor, and the relationship between the Parties shall not be deemed to constitute a partnership, joint venture, distributorship, agency, employee-employer or similar business relationship between the Parties. Neither Party is a legal representative of the other Party; and neither Party can assume or create any obligation, representation, warranty or guarantee, express or implied, on behalf of the other Party for any purpose whatsoever.

16.9 Waiver. No waiver by any Party of any term, provision or condition contained in this Agreement or any Project Plan, whether by conduct or otherwise, in any one or more instances, shall be deemed to be or construed as a further or continuing waiver of any such term, provision or condition or of any other term, provision or condition of this Agreement or any Project Plan.

**IN WITNESS WHEREOF**, each of the Parties hereto has caused this Agreement to be executed by its duly authorised representative effective as of the date written above.

**LONZA BIOLOGICS TUAS PTE LTD**

By: /s/ Andrew Morgan
Name: Andrew Morgan
Title: General Manager, Singapore

By: _____
Name:
Title:

**TRACON PHARMACEUTICALS, INC.**

By: /s/ Charles Theuer
Name: Charles Theuer
Title: CEO

*APPENDIX A*

**Price**

[…***…]

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*APPENDIX C*

**Approved Third Party Manufacturers**

[…***…]

***Confidential Treatment Requested

**Exhibit 23.1**

Consent of Independent Registered Public Accounting Firm

We consent to the reference to our firm under the caption "Experts" in the Registration Statement (Form S-1) and related Prospectus of TRACON Pharmaceuticals, Inc. for the registration of 3,231,515 shares of common stock, and to the incorporation by reference therein of our report dated February 28, 2017, with respect to the financial statements of TRACON Pharmaceuticals, Inc., included in its Annual Report (Form 10-K) for the year ended December 31, 2016, filed with the Securities and Exchange Commission.

/s/ Ernst & Young LLP

San Diego, California
March 24, 2017