

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
AMENDMENT NO. 1
TO
FORM S-1
REGISTRATION STATEMENT
UNDER THE SECURITIES ACT OF 1933
PLUS THERAPEUTICS, INC.
(Exact Name of Registrant as Specified in Its Charter)

Delaware (State or Other Jurisdiction of Incorporation or Organization)	3841 (Primary Standard Industrial Classification Code Number)	33-0827593 (I.R.S. Employer Identification Number)
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4200 Marathon Blvd., Suite 200
Austin, TX 78756
(737) 255-7194
(Address, Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Marc H. Hedrick, M.D.
President and Chief Executive Officer
Plus Therapeutics, Inc.
4200 Marathon Blvd., Suite 200
Austin, TX 78756
(737) 255-7194
(Name, Address, Including Zip Code, and Telephone Number, Including Area Code, of Agent for Service)

Copies to:

Cheston J. Larson, Esq.
Latham & Watkins LLP
12670 High Bluff Dr.
San Diego, CA 92130
Tel: (858) 523-5400
Fax: (858) 523-5450

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

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, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

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

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

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Proposed Maximum Aggregate Offering Price (1) (2) (3)	Amount of registration fee
Class A Units consisting of:		
(i) Shares of common stock, par value \$0.001 per share	\$17,250,000	\$2,091
(ii) Warrants to purchase common stock (4)	—	—
Class B Units consisting of:		
(i) Pre-funded warrants to purchase common stock	(5)	(5)
(ii) Warrants to purchase common stock (4)	—	—
Common stock issuable upon exercise of warrants (6)	\$17,250,000	\$2,091
Common stock issuable upon exercise of pre-funded warrants	(5)	(5)
Representative Warrants (4)	—	—
Common stock issuable upon exercise of Representative Warrants (6)	\$431,250	\$52
Total	\$34,931,250	\$4,234 (7)

(1) Estimated solely for the purpose of computing the amount of the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended (the “Securities Act”).

(2) Includes the price of additional shares of common stock and warrants to purchase shares of common stock that the underwriters have the option to purchase.

- (3) In addition to the shares of common stock set forth in this table, pursuant to Rule 416 under the Securities Act, this registration statement also registers such indeterminate number of shares of common stock as may become issuable upon exercise of these securities as the same may be adjusted as a result of stock splits, stock dividends, recapitalizations or other similar transactions.
- (4) Pursuant to Rule 457(g) of the Securities Act, no separate registration fee is required for the warrants because the warrants are being registered in the same registration statement as the common stock of the registrant issuable upon exercise of the warrants.
- (5) The proposed maximum aggregate offering price of the common stock will be reduced on a dollar-for-dollar basis based on the offering price of any pre-funded warrants offered and sold in the offering, and the proposed maximum aggregate offering price of the pre-funded warrants to be sold in the offering will be reduced on a dollar-for-dollar basis based on the offering price of any common stock sold in the offering. Accordingly, the proposed maximum aggregate offering price of the common stock, pre-funded warrants and warrants constituting the Class A Units and Class B Units is \$17,250,000, including the underwriters' option to purchase additional securities.
- (6) Fee based on exercise price applicable to shares issuable upon exercise of warrants in accordance with Rule 457(i) and Staff Compliance and Disclosure Interpretation 240.06.
- (7) \$1,212 of this amount was previously paid.

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

The information in this prospectus is not complete and may be changed. This prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS

SUBJECT TO COMPLETION

DATED SEPTEMBER 10, 2019



**Class A Units consisting of common stock and Series U Warrants and
Class B Units consisting of pre-funded Series V Warrants and Series U Warrants**

Plus Therapeutics, Inc. is offering Class A Units, with each Class A Unit consisting of one share of common stock, par value \$0.001 per share, and one Series U Warrant (“Series U Warrant”) to purchase one share of common stock (together with the share of common stock underlying each Series U Warrant, the “Class A Units”) at a public offering price of \$ per Class A Unit. Each Series U Warrant included in the Class A Units entitles its holder to purchase one share of common stock at an exercise price per share of \$.

We are also offering to those purchasers whose purchase of Class A Units in this offering would result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock following the consummation of this offering, the opportunity to purchase, if such purchasers so choose, in lieu of the number of Class A Units that would result in ownership in excess of 4.99% (or, at the election of the purchaser, 9.99%), Class B Units. Each Class B Unit consists of one pre-funded Series V Warrant (“Series V Warrants,” together with the Series U Warrants, the “Warrants”) to purchase one share of common stock and one Series U Warrant (together with the share of common stock underlying each Series V Warrant and each Series U Warrant, the “Class B Units” and, together with the Class A Units, the “units”) at a public offering price of \$ per Class B Unit, which is the public offering price per Class A Unit minus \$0.0001 (the offering of the units to the public, the “Offering”). Each Series V Warrant included in the Class B Units entitles its holder to purchase one share of common stock at an exercise price per share of \$0.0001. Each Series U Warrant included in the Class B Units entitles its holder to purchase one share of common stock at an exercise price per share of \$. The number of Class A Units sold in the offering shall be reduced on a one-to-one basis for each Class B Unit sold.

The Class A Units and Class B Units have no stand-alone rights and will not be certificated or issued as stand-alone securities. The shares of common stock and the Warrants comprising such units are immediately separable and will be issued separately, but will be purchased together in this Offering. The Series U Warrants offered hereby may be exercised from time to time beginning on the issuance date and expire on the five-year anniversary of the issuance date. The Series V Warrants offered hereby may be exercised from time to time beginning on the issuance date and until all of the Series V Warrants are exercised in full.

The Offering is being underwritten on a firm commitment basis. We have granted the underwriters an option to purchase up to additional shares of common stock and/or additional Series U Warrants to purchase up to shares of common stock (equal to 15% of the shares of common stock (including shares underlying the Series V Warrants) and 15% of the Series U Warrants in the Offering), in any combination thereof, at the applicable price to the public per share or per Series U Warrant, less the underwriting discounts and commissions. This option is exercisable for 45 days from the date of this prospectus.

Investing in our securities involves a high degree of risk. See the section entitled “Risk Factors” beginning on page 8 of this prospectus. You should carefully consider these risk factors, as well as the information contained in this prospectus, before you invest.

Our common stock is listed on the Nasdaq Capital Market, under the symbol “PSTV.” On September 9, 2019, the last reported sale price of our common stock was \$10.78 per share. On August 5, 2019, we effected a one-for-fifty reverse stock split of our outstanding common stock. There is no established public trading market for the Series U Warrants or Series V Warrants. We do not intend to apply for listing of the Series U Warrants or Series V Warrants on any securities exchange or recognized trading system.

	Per Class A Unit	Per Class B Unit	Total
Public Offering Price ⁽¹⁾	\$	\$	\$
Underwriting discount ^{(2) (3)}	\$	\$	\$
Proceeds to us, before expenses	\$	\$	\$

- (1) The public offering price and underwriting discount corresponds to (x) in respect of the Class A Units (i) a public offering price per share of common stock of \$ and (ii) a public offering price per Series U Warrant of \$ and (y) in respect of the Class B Units (i) a public offering price per Series V Warrant of \$ and (ii) a public offering price per Series U Warrant of \$.
- (2) We have also agreed to reimburse the representative of the underwriters for certain expenses and to issue to the representative of the underwriters warrants to purchase shares of common stock. See “Underwriting.”
- (3) We have granted a 45-day option to purchase up to additional shares of common stock and/or Series U Warrants to purchase up to shares of common stock (equal to 15% of the shares of common stock (including shares underlying the Series V Warrants) and 15% of the Series U Warrants in the offering), in any combination thereof, at the applicable price to the public per share or per Series U Warrant, less the underwriting discounts and commissions.

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 underwriters expect to deliver the securities to purchasers in the Offering on or about , 2019.

Sole Book-Running Manager

H.C. Wainwright & Co.

The date of this prospectus is , 2019

TABLE OF CONTENTS

	Page
About this Prospectus	i
Prospectus Summary	1
The Offering	5
Risk Factors	8
Forward-Looking Statements	15
Use of Proceeds	16
Market Price of our Common Stock and Related Stockholder Matters	17
Dividend Policy	17
Dilution	18
Security Ownership of Certain Beneficial Owners and Management	20
Description of Securities	21
Underwriting	29
Certain Material U.S. Federal Income Tax Considerations	33
Experts	41
Legal Matters	41
Where You Can Find More Information	42
Incorporation By Reference	42

ABOUT THIS PROSPECTUS

The registration statement of which this prospectus forms a part that we have filed with the Securities and Exchange Commission, or SEC, includes exhibits that provide more detail of the matters discussed in this prospectus. You should read this prospectus and the related exhibits filed with the SEC, together with the additional information described under the headings “Where You Can Find More Information” and “Incorporation by Reference” before making your investment decision.

You should rely only on the information contained in this prospectus or contained in any free writing prospectus prepared by or on behalf of us. We have not authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in a prospectus supplement or in any free writing prospectuses prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. You should assume that the information contained in this prospectus is accurate only as of its date regardless of the time of delivery of this prospectus or of any sale of securities. Our business, financial condition results of operations and prospects may have changed since the date of this prospectus.

We are not offering to sell or seeking offers to purchase these securities in any jurisdiction where the offer or sale is not permitted. We have not 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 and any free writing prospectus related to this Offering in jurisdictions outside the United States are required to inform themselves about and to observe any restrictions relating to this Offering and the distribution of this prospectus and any such free writing prospectus applicable to that jurisdiction.

Unless the context otherwise requires, references in this prospectus to “Plus Therapeutics,” “the Company,” “we,” “us” and “our” refer to Plus Therapeutics, Inc. and our subsidiaries. Solely for convenience, trademarks and tradenames referred to in this prospectus may appear without the ® or ™ symbols, but such references are not intended to indicate in any way that we will not assert, to the fullest extent under applicable law, our rights, or that the applicable owner will not assert its rights, to these trademarks and tradenames.

Unless the context otherwise requires, references in this prospectus to shares of our common stock, including prices per share of our common stock, reflect the one-for-fifty reverse stock split that was approved by our stockholders and board of directors on July 11, 2019. Our common stock commenced trading on a split-adjusted basis on August 6, 2019.

PROSPECTUS SUMMARY

This summary contains basic information about us and this Offering. Because it is a summary, it does not contain all of the information that you should consider before investing. Before you decide to invest in our units, you should read this entire prospectus carefully, including the section entitled “Risk Factors” and any information incorporated by reference herein.

Our Business

Overview

We are a clinical-stage pharmaceutical company focused on the discovery, development, and manufacturing scale up of complex and innovative treatments for patients battling cancer and other life-threatening diseases.

Our proprietary nanotechnology platform is currently centered around the enhanced delivery of a variety of drugs using novel liposomal encapsulation technology. Liposomal encapsulation has been extensively explored and undergone significant technical and commercial advances since it was first developed. Our platform is designed to facilitate new delivery approaches and/or formulations of safe and effective, injectable drugs, potentially enhancing the safety, efficacy and convenience for patients and healthcare providers.

We plan to exploit our nanotechnology platform and expertise using a simple multi-step model that enables us to address unmet needs or underserved conditions while managing risks and minimizing development costs through: (1) mapping of the current and anticipated market landscape to clearly understand the clinical and commercial opportunities and defining nanotechnology options, (2) redesign of known, safe and effective active pharmaceutical ingredients with new nanotechnology, (3) manufacture-to-scale of the reformulated drug along with critical non-clinical (i.e. bench, animal) analyses, (4) evaluation of early-stage clinical utility with a focus on proving safety and defining efficacy over the current standard of care, and (5) partnering the innovative treatment for late-stage clinical trials, regulatory approval, and commercial launch.

Pipeline

We intend to build our pipeline by in-licensing and/or acquiring drugs for niche and orphan markets, initially in oncology, that address significant unmet or substantially underserved medical needs and that represent global revenue opportunities greater than \$250 million. We intend to focus our pipeline on products that maximize our in-house expertise in nanoparticle drug design and complex formulation and leverage accelerated regulatory pathways by the U.S. Food and Drug Administration (FDA).

Our lead product candidate, DocePLUS, is a protein-stabilized PEGylated liposomal formulation of docetaxel, for which the process of preparation is patented. The active pharmaceutical ingredient, docetaxel, was approved by the FDA in 1999 and commonly used for treating cancers of the breast, head, neck, stomach, prostate, and lung.

In nonclinical studies utilizing mouse tumor models (lung, prostate, pancreatic, and mesothelioma), DocePLUS exhibited anti-tumor activity and was well-tolerated.

A Phase 1 clinical trial was conducted under an approved FDA Investigational New Drug application to examine the safety, pharmacokinetics, and pharmacodynamics of DocePLUS in 29 patients with solid tumors. The completed and published trial demonstrated that DocePLUS has an acceptable tolerability, a favorable pharmacokinetic profile, as well as promising anti-tumor activity that we believe warrants further exploration in larger Phase 2 trials.

The development targets for DocePLUS are potentially broad, however our initial focus is to develop a new second-line treatment option for small cell lung cancer. Single-agent chemotherapy with IV topotecan is currently the only FDA approved drug for platinum-sensitive patients who relapse at least 60 days after initiation of first-line treatment. Intravenously administered topotecan demonstrates activity in this population, however, overall response rate (24%), response duration (3.3 months), time to progression (3.1 months), and overall survival (5.8 months) were not statistically improved over CAV (cyclophosphamide, doxorubicin, and vincristine) treatment in a randomized comparative trial of patients with recurrent or progressive small cell lung cancer. Patients receive 1.5 mg/m² IV infusion of topotecan over 30 minutes daily for 5 consecutive days, starting on Day 1 of a 21-day cycle. We believe there is a clinical need for more effective and convenient treatment options for patients with small cell lung cancer with platinum-sensitive disease who relapsed.

Besides potential safety and efficacy benefits of DocePLUS, the dosing regimen for DocePLUS in small cell lung cancer patients will be only a 60 minute infusion on a single day, starting on Day 1 of a 21-day cycle. This approach will reduce the patient's number of visits to an infusion center from 5 (IV topotecan) to 1 in a given 21-day cycle. Overall, DocePLUS is intended to provide an effective, safe, and convenient therapeutic option for small cell lung cancer patients, thereby improving the quality of life for this population.

Recent key events associated with DocePLUS development include:

- In September 2018, the FDA granted DocePLUS an orphan drug designation for the treatment of small cell lung cancer.
- In the first half of 2019, we collaborated with an experienced global market evaluation firm in mapping the current and anticipated landscape, performing primary market research with U.S. medical oncologists and payers, suggesting small cell lung cancer as well as several other oncology targets represent compelling future disease targets with significant patient-benefit and revenue potential.
- In July 2019, we announced receipt of FDA feedback including confirmation that a 505(b)(2) application appears to be an acceptable regulatory path with docetaxel injection as a potentially acceptable listed drug. Furthermore, the FDA agreed that the completed nonclinical studies are sufficient to support the initiation of a clinical trial of DocePLUS in patients with platinum-sensitive small cell lung cancer who have progressed at least 60 days after initiation of first-line therapy.

Our next step is to conduct a Phase 2 clinical trial in small cell lung cancer under our existing, approved Investigation New Drug application. The goal of this trial is to assess safety and investigate efficacy signals in patients with platinum-sensitive small cell lung cancer who have progressed. The trial is also intended to support the statistical powering of a pivotal trial for the same indication.

We have also completed significant development work on DoxoPLUS, a generic version of Janssen's DOXIL®/CAELYX®, a PEGylated liposomal encapsulated doxorubicin for the treatment of breast and ovarian cancer, multiple myeloma, and Kaposi's sarcoma. PEGylated liposomal encapsulated doxorubicin is a heavily relied upon chemotherapeutic used globally for treating many types of cancer. We believe that data from a 38-patient European study of DoxoPLUS has met the statistical criteria for bioequivalence to CAELYX®, the current reference listed drug in Europe. We believe that these bioequivalence data for DoxoPLUS can serve as a basis for a Marketing Authorization Application to be submitted to the European Medicines Agency, or EMA. The market size for PEGylated liposomal encapsulated doxorubicin in Europe is approximately \$120 million. Our plan is to partner DoxoPLUS and we are currently in discussions with third parties. We do not currently plan to expend any more of our own funds to advance DoxoPLUS.

While we are continually looking at other product development candidates, we do not currently have any active product candidates other than DocePLUS.

Recent Developments

Plus Therapeutics, Inc.

On July 29, 2019, we filed an amendment to our Amended and Restated Certificate of Incorporation to effect a change of our corporate name from “Cytori Therapeutics, Inc.” to “Plus Therapeutics, Inc.”

Reverse Stock Split

In July 2019, our stockholders approved a reverse stock split of our shares of common stock at a ratio of between one-for-five and one-for-fifty, with the exact ratio to be chosen within that range at the discretion of our board of directors. On August 5, 2019, we effected a one-for-fifty reverse stock split of our shares of common stock, or the 2019 Reverse Stock Split, at the direction of our board of directors and began trading on a post-split basis on August 6, 2019. As a result of the 2019 Reverse Stock Split, every fifty (50) shares of our common stock outstanding were automatically changed and reclassified into one (1) new share of common stock. Stockholders of fractional shares of common stock otherwise issuable pursuant to the 2019 Reverse Stock Split were rounded up. The 2019 Reverse Stock Split did not change the par value of our stock or the number of common shares or preferred shares authorized by our certificate of incorporation. All share and per share amounts in this prospectus have been retroactively adjusted to reflect the 2019 Reverse Stock Split for all periods presented. As of June 30, 2019, we had 443,117 shares of common stock outstanding, as adjusted by the 2019 Reverse Stock Split. The financial statements in our Quarterly Report on Form 10-Q for the quarter ended June 30, 2019, filed on August 15, 2019 and incorporated by reference herein, have been adjusted to reflect the 2019 Reverse Stock Split.

Nasdaq Compliance

On August 28, 2018, we received a written notice from Nasdaq staff indicating that, based upon the closing bid price of our common stock for the prior 30 consecutive business days, we no longer meet the requirement to maintain a minimum bid price of \$1.00 per share, as set forth in Nasdaq Listing Rule 5550(a)(2). In accordance with Nasdaq Listing Rule 5810(c)(3)(A), we were provided an initial period of 180 calendar days, or until February 25, 2019, in which to regain compliance. We were also granted an additional compliance period of 180 calendar days, or until August 26, 2019, in which to regain compliance after meeting the continued listing requirement for market value of publicly held shares and all other initial listing standards for the Nasdaq Capital Market, with the exception of the bid price requirement, and providing notice to Nasdaq staff of our intent to cure the deficiency during this second compliance period, by effecting a reverse stock split, if necessary. In order to regain compliance with the minimum bid price requirement, the closing bid price of our common stock must have been at least \$1.00 per share for a minimum of 10 consecutive business days during the 180-day period. In August 2019, we consummated a 1-for-50 reverse stock split pursuant to which the minimum bid price of our common stock rose above \$1.00. On August 29, 2019, we received written notice from Nasdaq staff that we had regained compliance with the Nasdaq Stock Market Listing Rule 5550(a)(2) concerning our minimum bid price per share of our common stock.

On August 16, 2019, we received a written notice from Nasdaq staff indicating that we no longer meet the minimum publicly held shares requirement for continued listing on the Nasdaq Capital Market under Nasdaq Listing Rule 5550(a)(4), which requires listed companies to maintain at least 500,000 publicly held shares. With respect to the August 16, 2019 notice, we have until September 26, 2019 to provide Nasdaq staff with a specific plan to achieve and sustain compliance with all listing requirements, including the time frame for completion of such plan. As of August 31, 2019, we have 786,807 publicly held shares outstanding, and we expect to receive notice from Nasdaq staff that we have regained compliance with Nasdaq Stock Market Listing Rule 5550(a)(4) in the near term. However, on August 19, 2019, we received a written notice from Nasdaq staff indicating that, based on our stockholders' deficit of \$6.3 million as of June 30, 2019, we no longer meet the alternative compliance standards of market value of listed securities or net income from continuing operations for continued listing on the Nasdaq Capital Market under Nasdaq Listing Rule 5550(b)(1), which requires listed companies to maintain stockholders' equity of at least \$2.5 million. With respect to the August 19, 2019 notice, we have until October 3, 2019 to provide Nasdaq staff with a specific plan to achieve and sustain compliance with all listing requirements, including the time frame for completion of such plan. We intend to evaluate various courses of action to regain compliance with Nasdaq Listing Rules within the compliance periods specified by Nasdaq. However, there can be no assurance that we will be able to regain compliance within such compliance periods.

BARDA Contract

On July 21, 2019, we received an order from the U.S. Department of Health and Human Services / Office of the Assistant Secretary for Preparedness and Response / Biomedical Advanced Research and Development Authority regarding Contract HHSO100201200008C dated September 27, 2012, as amended, or the BARDA Contract, to suspend all work on the BARDA Contract, including the RELIEF clinical trial, except for certain activities related to orderly close out of the trial and contract. Pursuant to the order, the BARDA Contract will be terminated on or before by January 17, 2020. We do not expect to complete any additional work under the BARDA Contract prior to such termination, other than winding down the RELIEF clinical trial. We do not expect this wind down to have a material financial impact on the Company.

The Offering

Class A Units offered by us	We are offering Class A Units. Each Class A Unit consists of one share of common stock and one Series U Warrant to purchase one share of common stock (together with the share of common stock underlying such Series U Warrant).
Offering price per Class A Unit	\$
Class B Units offered by us	We are also offering to those purchasers whose purchase of Class A Units in this Offering would result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock following the consummation of this Offering, the opportunity to purchase, in lieu of the number of Class A Units that would result in ownership in excess of 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock, Class B Units. Each Class B Unit consists of one Series V Warrant to purchase one share of common stock and one Series U Warrant to purchase one share of common stock (together with the shares of our common stock underlying such Warrants). The number of Class A Units sold in the offering shall be reduced on a one-to-one basis for each Class B Unit sold.
Offering price per Class B Unit	\$
Option to purchase additional securities	The underwriters have the option to purchase up to additional shares of common stock and/or additional Series U Warrants to purchase up to shares of common stock (equal to 15% of the shares of common stock (including shares underlying the Series V Warrants) and 15% of the Series U Warrants in the offering), in any combination thereof, at the applicable price to the public per share or per Series U Warrant set forth on the cover page of this prospectus, less the underwriting discounts and commissions.
Description of Series U Warrants	The Series U Warrants will be exercisable beginning on the date of issuance and expire on the five-year anniversary of the date of issuance at an initial exercise price per share equal to \$, subject to appropriate adjustment in the event of recapitalization events, stock dividends, stock splits, stock combinations, reclassifications, reorganizations or similar events affecting our common stock. Notwithstanding the foregoing, we shall not effect any exercise of Series U Warrants to the extent that, after giving effect to an exercise, the holder of Series U Warrants (together with such holder's affiliates, and any persons acting as a group together with such holder or any of such holder's affiliates) would beneficially own a number of shares of our common stock in excess of 4.99% (or, at the election of the purchaser prior to the date of issuance, 9.99%) of the shares of our common stock then outstanding after giving effect to such exercise.
Description of pre-funded Series V Warrants	The pre-funded Series V Warrants will be exercisable beginning on the date of issuance, until all of the Series V Warrants are exercised in full, at an exercise price per share equal to \$0.0001, subject to appropriate adjustment in the event of recapitalization events, stock dividends, stock splits, stock combinations, reclassifications, reorganizations or similar events affecting our common stock. Notwithstanding the foregoing, we shall not effect any exercise of Series V Warrants to the extent that, after giving effect to an exercise, the holder of Series V Warrants (together with such holder's affiliates, and any persons acting as a group together with such holder or any of such holder's affiliates) would beneficially own a number of shares of our common stock in excess of 4.99% (or, at the election of the purchaser prior to the date of issuance, 9.99%) of the shares of our common stock then outstanding after giving effect to such exercise.

Shares of common stock outstanding before the Offering

shares.

Shares of common stock outstanding after the Offering

shares (assuming no Class B Units are sold and no exercise of the underwriters' option to purchase additional securities).

Use of Proceeds

We estimate that the net proceeds to us from this Offering will be approximately \$ million, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use net proceeds from this Offering for working capital, payment of interest on our debt and general corporate purposes, which may include research and development of our oncology product pipeline, preclinical and clinical trials and studies, regulatory submissions, expansion of our sales and marketing organizations and efforts, intellectual property protection and enforcement and capital expenditures. We may use a portion of the net proceeds to acquire complementary products, technologies or businesses or to repay principal on our debt; however, we currently have no agreements or commitments to complete any such transactions or to make any such principal repayments and are not involved in negotiations to do so. See the section entitled "Use of Proceeds" on page 16 of this prospectus.

Risk Factors

This investment involves a high degree of risk. You should carefully read and consider the information set forth under "Risk Factors" on page 8 of this prospectus and the documents incorporated by reference herein before deciding to invest in our securities.

Nasdaq Capital Market common stock symbol

PSTV

No listing of Warrants

There is no established public trading market for the Series U Warrants or Series V Warrants, and we do not intend to apply for listing of the Series U Warrants or Series V Warrants on any securities exchange or trading system. Without an active trading market, the liquidity of the Series U Warrants and Series V Warrants will be limited.

Issuance of Warrants

The Series U Warrants and the Series V Warrants that are purchased in the Offering as part of the units will be issued as separate warrant certificates.

The number of shares of common stock that will be outstanding after this Offering is based on 443,117 shares outstanding as of June 30, 2019 and excludes:

- 5,303 shares of common stock issuable upon the exercise of stock options outstanding as of June 30, 2019 with a weighted average exercise price of \$1,776.99 per share;
- 1 share of common stock issuable upon the vesting of outstanding restricted stock awards as of June 30, 2019;
- 4,406 shares of common stock available for future grants under our 2014 Equity Incentive Plan as of June 30, 2019;
- 617 shares of common stock available for future grants under our 2015 New Employee Incentive Plan as of June 30, 2019;

- 6,673 shares of common stock issuable upon the conversion of outstanding shares of Series B Preferred Stock as of June 30, 2019;
- 87,904 shares of common stock issuable upon the conversion of outstanding shares of Series C Preferred Stock as of June 30, 2019;
- 177,727 shares of our common stock issuable upon the exercise of outstanding warrants as of June 30, 2019 with a weighted-average exercise price of \$81.19 per share;
- shares of our common stock issued between July 1, 2019 and _____, 2019 pursuant to our at-the-market sales agreement;
- shares of our common stock issued between July 1, 2019 and _____, 2019 pursuant to our Lincoln Park Capital Fund, LLC purchase agreement;
- the shares of our common stock issuable upon the exercise of the Warrants offered hereby; and
- the shares of our common stock issuable upon the exercise of the representative's warrants offered hereby.

RISK FACTORS

Investing in our securities involves a high degree of risk. Before making an investment decision with respect to our securities, we urge you to carefully consider the risks described in the “Risk Factors” section of our Annual Report on Form 10-K for the year ended December 31, 2018 and our subsequent Quarterly Reports on Form 10-Q, which are incorporated by reference into this prospectus. These risk factors relate to our business, intellectual property, regulatory matters, and ownership of our common stock. In addition, the following risk factors present material risks and uncertainties associated with the Offering. The risks and uncertainties incorporated by reference into this prospectus or described below are not the only ones we face. Additional risks and uncertainties not presently known or which we consider immaterial as of the date hereof may also have an adverse effect on our business. If any of the matters discussed in the following risk factors were to occur, our business, financial condition, results of operations, cash flows or prospects could be materially adversely affected, the market price of our securities could decline and you could lose all or part of your investment in our securities.

Risks Related to the Offering

If you purchase our securities in this Offering, you will incur immediate and substantial dilution in the net tangible book value per share of the common stock that you purchase.

Because the effective price per share of common stock included in the Class A Units (or issuable upon the exercise of the Series V Warrants included in the Class B Units) being offered is substantially higher than the net tangible book value per share of our common stock, you will experience substantial dilution to the extent of the difference between the effective public offering price per share of common stock you pay in this Offering and the net tangible book value per share of our common stock immediately after this Offering. After giving effect to the sale of Class A Units (or Class B Units) at a public offering price of \$ per Class A Unit (or Class B Unit), and assuming the exercise of all Series V Warrants included in the Class B Units, no exercise of any of the Series U Warrants and no exercise of any option to purchase additional securities, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, new investors will incur immediate dilution of \$ per share, representing the difference between the effective public offering price per share and our net tangible book value per share as of June 30, 2019. To the extent outstanding stock options or warrants are exercised or outstanding shares of preferred stock are converted, there will be further dilution to new investors.

There is currently a limited market for our securities, and any trading market that exists in our securities may be highly illiquid and may not reflect the underlying value of our net assets or business prospects.

Although our common stock is traded on Nasdaq, there is currently a limited market for our common stock and an active market may never develop. Investors are cautioned not to rely on the possibility that an active trading market may develop.

We could be delisted from Nasdaq, which could seriously harm the liquidity of our stock and our ability to raise capital.

Following notice from Nasdaq staff in June 2015 and December 2015, we had a hearing in January 2016 relating to our noncompliance with the \$1.00 minimum bid price per share requirement. The Nasdaq Hearing Panel granted us until May 31, 2016 to come into compliance with the minimum bid price requirement, including requirements relating to obtaining stockholders approval of a reverse stock split that would bring our stock price above \$1.00 per share for a minimum of 10 consecutive trading days. We transferred the listing of our common stock from the Nasdaq Global Market to the Nasdaq Capital Market in February 2016. In May 2016, we consummated a 1-for-15 reverse stock split pursuant to which the minimum bid price per share of our common stock rose above \$1.00. Pursuant to a letter dated May 26, 2016, the Nasdaq staff delivered notice to us that we had regained compliance with Nasdaq’s minimum bid price rule.

On September 5, 2017, we received a written notice from Nasdaq staff indicating that, based upon the closing bid price of our common stock for the prior 30 consecutive business days, we no longer met the requirement to maintain a minimum bid price of \$1.00 per share, as set forth in Nasdaq Listing Rule 5550(a)(2). In accordance with Nasdaq Listing Rule 5810(c)(3)(A), we were provided a period of 180 calendar days, or until March 5, 2018, in which to regain compliance. We were granted an additional compliance period of 180 calendar days, or until September 4, 2018, in which to regain compliance after meeting the continued listing requirement for market value of publicly held shares and all other initial listing standards for the Nasdaq Capital Market, with the exception of the bid price requirement, and providing notice to Nasdaq staff of our intent to cure the deficiency during this second compliance period, by effecting a reverse stock split, if necessary. In May 2018, we consummated a 1-for-10 reverse stock split pursuant to which the minimum bid price of our common stock rose above \$1.00. On June 8, 2018, we received written notice from Nasdaq that we had regained compliance with the Nasdaq Stock Market Listing Rule 5550(a)(2) concerning our minimum bid price per share of our common stock.

On August 28, 2018, we received a written notice from Nasdaq staff indicating that, based upon the closing bid price of our common stock for the prior 30 consecutive business days, we no longer meet the requirement to maintain a minimum bid price of \$1.00 per share, as set forth in Nasdaq Listing Rule 5550(a)(2). In accordance with Nasdaq Listing Rule 5810(c)(3)(A), we were provided an initial period of 180 calendar days, or until February 25, 2019, in which to regain compliance. We were also granted an additional compliance period of 180 calendar days, or until August 26, 2019, in which to regain compliance after meeting the continued listing requirement for market value of publicly held shares and all other initial listing standards for the Nasdaq Capital Market, with the exception of the bid price requirement, and providing notice to Nasdaq staff of our intent to cure the deficiency during this second compliance period, by effecting a reverse stock split, if necessary. In order to regain compliance with the minimum bid price requirement, the closing bid price of our common stock must have been at least \$1.00 per share for a minimum of 10 consecutive business days during the 180-day period. In August 2019, we consummated a 1-for-50 reverse stock split pursuant to which the minimum bid price of our common stock rose above \$1.00. On August 29, 2019, we received written notice from Nasdaq staff that we had regained compliance with the Nasdaq Stock Market Listing Rule 5550(a)(2) concerning our minimum bid price per share of our common stock.

On August 16, 2019, we received a written notice from Nasdaq staff indicating that we no longer meet the minimum publicly held shares requirement for continued listing on the Nasdaq Capital Market under Nasdaq Listing Rule 5550(a)(4), which requires listed companies to maintain at least 500,000 publicly held shares. With respect to the August 16, 2019 notice, we have until September 26, 2019 to provide Nasdaq staff with a specific plan to achieve and sustain compliance with all listing requirements, including the time frame for completion of such plan. As of August 31, 2019, we have 786,807 publicly held shares outstanding, and we expect to receive notice from Nasdaq staff that we have regained compliance with Nasdaq Stock Market Listing Rule 5550(a)(4) in the near term. However, on August 19, 2019, we received a written notice from Nasdaq staff indicating that, based on our stockholders' deficit of \$6.3 million as of June 30, 2019, we no longer meet the alternative compliance standards of market value of listed securities or net income from continuing operations for continued listing on the Nasdaq Capital Market under Nasdaq Listing Rule 5550(b)(1), which requires listed companies to maintain stockholders' equity of at least \$2.5 million. With respect to the August 19, 2019 notice, we have until October 3, 2019 to provide Nasdaq staff with a specific plan to achieve and sustain compliance with all listing requirements, including the time frame for completion of such plan. We intend to evaluate various courses of action to regain compliance with Nasdaq Listing Rules within the compliance periods specified by Nasdaq. However, there can be no assurance that we will be able to regain compliance within such compliance periods.

If we cease to be eligible to trade on Nasdaq:

- We may have to pursue trading on a less recognized or accepted market, such as the OTC Bulletin Board or the “pink sheets.”
- Shares of our common stock could be less liquid and marketable, thereby reducing the ability of stockholders to purchase or sell our shares as quickly and as inexpensively as they have done historically. If our stock is traded as a “penny stock,” transactions in our stock would be more difficult and cumbersome.
- We may be unable to access capital on favorable terms or at all, as companies trading on alternative markets may be viewed as less attractive investments with higher associated risks, such that existing or prospective institutional investors may be less interested in, or prohibited from, investing in our common stock. This may also cause the market price of our common stock to decline.

If shares of our common stock become subject to the penny stock rules, it would become more difficult to trade them.

The SEC has adopted regulations which generally define a “penny stock” to be an equity security that has a market price of less than \$5.00 per share or an exercise price of less than \$5.00 per share, subject to specific exemptions, including an exemption for any securities listed on a national securities exchange. The rules impose additional sales practice requirements on broker-dealers for transactions involving “penny stock”, with some exceptions. If shares of our common stock were delisted from the Nasdaq Capital Market and determined to be “penny stock”, broker-dealers may find it more difficult to trade such securities and you may find it more difficult to acquire or dispose of such securities on the secondary market.

Our share price is volatile, and you may not be able to resell our shares at a profit or at all.

The market price of our common stock could be subject to wide fluctuations in response to numerous factors, some of which are beyond our control. These factors include, among other things:

- fluctuations in our operating results or the operating results of our competitors;
- the outcome of clinical trials involving the use of our products, including our sponsored trials;
- changes in estimates of our financial results or recommendations by securities analysts;
- variance in our financial performance from the expectations of securities analysts;
- changes in the estimates of the future size and growth rate of our markets;
- changes in accounting principles or changes in interpretations of existing principles, which could affect our financial results;
- conditions and trends in the markets we currently serve or which we intend to target with our product candidates;
- changes in general economic, industry and market conditions;
- success of competitive products and services;
- changes in market valuations or earnings of our competitors;
- announcements of significant new products, contracts, acquisitions or strategic alliances by us or our competitors;
- our continuing ability to list our securities on an established market or exchange;

- the timing and outcome of regulatory reviews and approvals of our products;
- the commencement or outcome of litigation involving our company, our general industry or both;
- changes in our capital structure, such as future issuances of securities or the incurrence of additional debt;
- actual or expected sales of our common stock by the holders of our common stock; and
- the trading volume of our common stock.

In addition, the stock market in general, the Nasdaq Capital Market and the market for pharmaceutical companies in particular may experience a loss of investor confidence. A loss of investor confidence may result in extreme price and volume fluctuations in our common stock that are unrelated or disproportionate to the operating performance of our business, our financial condition or results of operations, which may materially harm the market price of our common stock and result in substantial losses for stockholders.

The market price of our common stock may decline after you purchase units in this Offering. If that occurs, you may buy Series U Warrants which are exercisable for shares of our common stock at a price greater than the prevailing market price. There is currently no market for our Series U Warrants and, unless we or you choose to exercise your Series U Warrants for shares of common stock, you will not be able to re-sell such Series U Warrants.

Future sales of our common stock may depress our share price.

As of June 30, 2019, we had 443,117 shares of our common stock outstanding. Sales of shares of common stock in the public market, including pursuant to our purchase agreement with Lincoln Park Capital Fund, LLC, or our at-the-market offering program, or the expectation of such sales, could cause the market price of our common stock to decline. We may also sell additional common stock or securities convertible into or exercisable or exchangeable for common stock in subsequent public or private offerings or other transactions, which may adversely affect the market price of our common stock.

We have granted demand registration rights for the resale of certain shares of our common stock to each of Astellas Pharma Inc. and Green Hospital Supply, Inc. pursuant to common stock purchase agreements previously entered into with each of these stockholders. An aggregate of approximately 6,000 shares of our common stock are subject to these demand registration rights. If we receive a written request from any of these stockholders to file a registration statement under the Securities Act of 1933, as amended, or the Securities Act, covering its shares of unregistered common stock, we are required to use reasonable efforts to prepare and file with the SEC within 30 business days of such request a registration statement covering the resale of the shares for an offering to be made on a continuous basis pursuant to Rule 415 under the Securities Act.

We have also granted registration rights to Azaya Therapeutics, Inc., or Azaya, with respect to the 2,347 shares of our common stock that we issued in the name of Azaya at the closing of our acquisition of the Nanomedicine assets. Under the terms of our asset purchase agreement with Azaya, we filed a registration statement with the SEC covering these shares, which was declared effective by the SEC. Any sales by Azaya could put pressure on our stock and depress our share price.

Our stockholders may experience substantial dilution in the value of their investment if we issue additional shares of our capital stock.

Our charter allows us to issue up to 100,000,000 shares of our common stock and to issue and designate the rights of, without stockholder approval, up to 5,000,000 shares of preferred stock. To raise additional capital, we may

in the future sell additional shares of our common stock or other securities convertible into or exchangeable for our common stock at prices that are lower than the prices paid by existing stockholders, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders, which could result in substantial dilution to the interests of existing stockholders.

We may issue debt and equity securities or securities convertible into equity securities, any of which may be senior to our common stock as to distributions and in liquidation, which could negatively affect the value of our common stock.

In the future, we may attempt to increase our capital resources by entering into debt or debt-like financing that is unsecured or secured by up to all of our assets, or by issuing additional debt or equity securities, which could include issuances of secured or unsecured commercial paper, medium-term notes, senior notes, subordinated notes, guarantees, preferred stock, hybrid securities, or securities convertible into or exchangeable for equity securities. In the event of our liquidation, our lenders and holders of our debt and preferred securities would receive distributions of our available assets before distributions to the holders of our common stock. Because our decision to incur debt and issue securities in future offerings may be influenced by market conditions and other factors beyond our control, we cannot predict or estimate the amount, timing or nature of our future offerings or debt financings. Further, market conditions could require us to accept less favorable terms for the issuance of our securities in the future.

Our management will have broad discretion over the use of the net proceeds from this Offering, you may not agree with how we use the proceeds and the proceeds may not be invested successfully.

Our management will have broad discretion as to the use of the net proceeds from this Offering and could use them for purposes other than those contemplated at the time of commencement of this Offering. Accordingly, you will be relying on the judgment of our management with regard to the use of these net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. It is possible that, pending their use, we may invest the net proceeds in a way that does not yield a favorable, or any, return for us. The failure of our management to use such funds effectively could have a material adverse effect on our business, financial condition, operating results and cash flows.

Your interest in our company may be diluted as a result of this Offering.

Stockholders who do not purchase units in the Offering should expect that they will, at the completion of this Offering, own a smaller proportional interest in our company than would otherwise be the case had they purchased units in the Offering in an amount proportionate to their holdings before the Offering. Further, the shares issuable upon the exercise of the Warrants to be issued pursuant to the Offering will dilute the ownership interest of stockholders not participating in this Offering or holders of Warrants who have not exercised them.

In addition, our outstanding shares of Series C Convertible Preferred Stock, or the Series C Preferred Stock, and our Series T Warrants contain anti-dilution provisions which provide that, subject to certain exceptions contained in the certificate of designation for the Series C Preferred Stock and the Warrant Agent Agreement for the Series T Warrants, or the Warrant Agent Agreement, if we issue or sell, or are deemed to have issued or sold, any shares of common stock or Common Stock Equivalents (as defined in the certificate of designation and the Warrant Agent Agreement) for a consideration per share lower than the conversion price of the Series C Preferred Stock or the exercise price of the Series T Warrants, as applicable, in effect immediately prior to such issuance or sale, or deemed issuance or sale, then the conversion price of the Series C Preferred Stock or the exercise price of the Series T Warrants, as applicable, then in effect will be reduced to an amount equal to such lower price pursuant to the terms of the certificate of designation and the Warrant Agent Agreement. As of August 6, 2019, after giving effect to the August 2019 Reverse Stock Split, the conversion price of the Series C Preferred Stock and the exercise price of the Series T Warrants were both \$7.50. These anti-dilution provisions would be triggered by the future issuance by us of shares of common stock or Common Stock Equivalents (as defined in the certificate of designation), including

pursuant to this Offering, at a price per share below the then-applicable conversion price of the Series C Preferred Stock or the exercise price of the Series T Warrants, as applicable, subject to limited exceptions.

This Offering may cause the trading price of our common stock to decrease.

The unit price, together with the number of shares of common stock we propose to issue and ultimately will issue if this Offering is completed, may result in an immediate decrease in the market price of our common stock. This decrease may continue after the completion of this Offering. We cannot predict the effect, if any, that the availability of shares for future sale represented by the Warrants issued in connection with the Offering will have on the market price of our common stock from time to time. Further, if a substantial number of units are purchased and the holders of the shares received upon exercise of the related Warrants choose to sell some or all of the shares underlying the Warrants, the resulting sales could depress the market price of our common stock.

Holders of our Warrants will have no rights as a common stockholder until such holders exercise their Warrants and acquire our common stock, except as set forth in the Warrants.

Until holders of Warrants acquire shares of our common stock upon exercise of the Warrants, holders of Warrants will have no rights with respect to the shares of our common stock underlying such Warrants, except as set forth in the Warrants. Upon exercise of the Warrants, the holders thereof will be entitled to exercise the rights of a common stockholder only as to matters for which the record date occurs after the exercise date.

The unit price determined for this Offering is not an indication of the fair value of our common stock.

In determining the unit price, our board of directors considered a number of factors, including, but not limited to, our need to raise capital in the near term to continue our operations, the current and historical trading prices of our common stock, a price that would increase the likelihood of participation in the Offering, the cost of capital from other sources, the value of the Warrants being issued as components of the units, comparable precedent transactions, an analysis of stock price trading multiples for companies similar to us that, among other things, did not need to raise capital in the near-term, and our most recently forecasted revenue relative to our peer group. The unit price does not necessarily bear any relationship to any established criteria for value. No valuation consultant or investment banker has opined upon the fairness or adequacy of the unit price. You should not consider the unit price as an indication of the value of our company or our common stock.

Absence of a public trading market for the Warrants may limit your ability to resell the Warrants.

There is no established trading market for the Warrants to be issued pursuant to this Offering, and the Warrants may not be widely distributed. We do not plan to apply to list the Warrants for trading on any public market. Even if a market for the Warrants does develop, the price of the Warrants may fluctuate and liquidity may be limited. If a market for the Warrants does not develop, then purchasers of the Warrants may be unable to resell the Warrants or sell them only at an unfavorable price for an extended period of time, if at all. Future trading prices of the Warrants will depend on many factors, including:

- our operating performance and financial condition;
- our ability to continue the effectiveness of the registration statement, of which this prospectus is a part, covering the Warrants and the common stock issuable upon exercise of the Warrants;
- the interest of securities dealers in making a market; and
- the market for similar securities.

The market price of our common stock may never exceed the exercise price of the Series U Warrants issued in connection with this Offering.

The Series U Warrants being issued in connection with this Offering become exercisable upon issuance and will expire five years from the date of issuance. The market price of our common stock may never exceed the exercise price of the Series U Warrants prior to their date of expiration. Any Series U Warrants not exercised by their date of expiration will expire worthless and we will be under no further obligation to the Series U Warrant holder.

Since the Warrants are executory contracts, they may have no value in a bankruptcy or reorganization proceeding.

In the event a bankruptcy or reorganization proceeding is commenced by or against us, a bankruptcy court may hold that any unexercised Warrants are executory contracts that are subject to rejection by us with the approval of the bankruptcy court. As a result, holders of the Warrants may, even if we have sufficient funds, not be entitled to receive any consideration for their Warrants or may receive an amount less than they would be entitled to if they had exercised their Warrants prior to the commencement of any such bankruptcy or reorganization proceeding.

We may be unable to successfully pursue the 505(b)(2) pathway as planned, which would materially impact our likelihood of obtaining FDA approval.

A 505(b)(2) application that relies for approval on the FDA's finding of safety and/or effectiveness for one or more listed drugs must establish that such reliance is scientifically appropriate, and must submit data necessary to support any aspects of the proposed drug product that represent modifications to the listed drug(s). We must establish a bridge between our proposed drug product and each listed drug upon which we propose to rely, to demonstrate that such reliance is scientifically justified. Determining and reaching agreement with the FDA regarding exactly what additional or "bridging" data will be needed to support the proposed modification to the listed drug can present challenges and is a fact-specific determination that must be made on a case-by-case basis. If we are unable to establish to the FDA's satisfaction that our reliance on the listed drug is scientifically appropriate, and that we have sufficiently addressed the safety and effectiveness implications of our proposed modifications, we may be unable to utilize this regulatory pathway.

If the FDA does not allow us to pursue the 505(b)(2) regulatory pathway for our product candidates as anticipated, we may need to conduct additional clinical trials, provide additional data and information and meet additional standards for regulatory approval. If this were to occur, the time and financial resources required to obtain FDA approval for our product candidates would likely substantially increase. Moreover, the inability to pursue the 505(b)(2) regulatory pathway could result in new competitive products reaching the market faster than our product candidates, which could materially adversely impact our competitive position and prospects. Even if we are allowed to pursue the 505(b)(2) regulatory pathway for a product candidate, we cannot assure you that we will receive the requisite or timely approvals for commercialization of such product candidate. Any failure to obtain regulatory approval of our product candidates would significantly limit our ability to generate revenues, and any failure to obtain such approval for all of the indications and labeling claims we deem desirable could reduce our potential revenues.

FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated herein by reference contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on our management's current beliefs, expectations and assumptions about future events, conditions and results and on information currently available to us. Discussions containing these forward-looking statements may be found, among other places, in the Sections entitled "Business," "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" incorporated by reference from our most recent Annual Report on Form 10-K and our Quarterly Reports on Form 10-Q, as well as any amendments thereto, filed with the SEC.

All statements, other than statements of historical fact, included or incorporated herein regarding our strategy, future operations, financial position, future revenues, projected costs, plans, prospects and objectives are forward-looking statements. Words such as "expect," "anticipate," "intend," "plan," "believe," "seek," "estimate," "think," "may," "could," "will," "would," "should," "continue," "potential," "likely," "opportunity" and similar expressions or variations of such words are intended to identify forward-looking statements, but are not the exclusive means of identifying forward-looking statements. Additionally, forward-looking statements include, without limitation, statements about our anticipated expenditures, including those related to pre-clinical and clinical trials and research studies and development, sales and marketing, and general and administrative expenses, the potential size of the market for our products, future development and/or expansion of our products in our markets, our ability to generate product or development revenues and the sources of such revenues, our ability to effectively manage our gross profit margins, our ability to obtain and maintain regulatory approvals, expectations as to our future performance, liquidity and capital resources, including our potential need for additional financing and the availability thereof, our ability to continue as a going concern, our ability to remain listed on the Nasdaq Capital Market, our ability to repay or refinance some or all of our outstanding indebtedness and our ability to raise capital in the future, and the potential enhancement of our cash position through development, marketing, and licensing arrangements. Such statements are based on currently available operating, financial and competitive information and are subject to various risks, uncertainties and assumptions that could cause actual results to differ materially from those anticipated or implied in our forward-looking statements due to a number of factors including, but not limited to, the early stage of our product candidates, the results of our research and development activities, including uncertainties relating to the clinical trials of our product candidates, our need and ability to raise additional cash, the outcome of our partnering/licensing efforts, risks associated with laws or regulatory requirements applicable to us, market conditions, product performance, potential litigation, competition within the regenerative medicine field, and other factors set forth above under the section entitled "Risk Factors" in this prospectus and any accompanying prospectus supplement. Given these risks, uncertainties and other factors, many of which are beyond our control, you should not place undue reliance on these forward-looking statements.

Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to revise any forward-looking statements to reflect events or developments occurring after the date of this prospectus, even if new information becomes available in the future.

USE OF PROCEEDS

We estimate that the net proceeds from this Offering will be approximately \$ million (or \$ if the underwriters exercise their option to purchase additional securities in full), after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. We will only receive additional proceeds from the exercise of the Series U Warrants issuable in connection with this Offering if the Series U Warrants are exercised and the holders of such Series U Warrants pay the exercise price in cash upon such exercise and do not utilize the cashless exercise provision of the Series U Warrants.

We intend to use net proceeds from this Offering for working capital, payment of interest on our debt and general corporate purposes, which may include research and development of our oncology product pipeline, preclinical and clinical trials and studies, regulatory submissions, expansion of our sales and marketing organizations and efforts, intellectual property protection and enforcement and capital expenditures. We have not yet determined the amount of net proceeds to be used specifically for any particular purpose or the timing of these expenditures. We may use a portion of the net proceeds to acquire complementary products, technologies or businesses or to repay principal on our debt; however, we currently have no agreements or commitments to complete any such transactions or to make any such principal repayments and are not involved in negotiations to do so. Accordingly, our management will have significant discretion and flexibility in applying the net proceeds from the sale of these securities.

MARKET PRICE OF OUR COMMON STOCK AND RELATED STOCKHOLDER MATTERS

From August 2000 (our initial public offering in Germany) until September 2007, our common stock was quoted on the Frankfurt Stock Exchange under the symbol “XMPA” (formerly XMP). In September 2007, our stock closed trading on the Frankfurt Stock Exchange. In December 2005, our common stock commenced trading on the Nasdaq Capital Market under the symbol “CYTX.” From December 2005 until February 2006, our common stock traded on the Nasdaq Capital Market, from February 2006 until February 2016, it traded on the Nasdaq Global Market, and since February 2016, it has traded on the Nasdaq Capital Market. On August 6, 2019, our common stock commenced trading on the Nasdaq Capital Market under the symbol “PSTV.”

The closing price of our common stock on September 9, 2019 was \$10.78 per share. All of our outstanding shares have been deposited with the Depository Trust & Clearing Corporation, or DTCC, since December 2005. As of August 31, 2019, we had approximately 14 record holders of our common stock. Because many of our shares are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of individual stockholders represented by these record holders.

DIVIDEND POLICY

We have never declared or paid any dividends on our common stock and do not anticipate paying any in the foreseeable future. Furthermore, our Loan and Security Agreement with Oxford Finance, LLC currently prohibits our issuance of cash dividends. We currently intend to retain all of our future earnings, if any, to finance the operation and expansion of our business. Any future determination relating to our dividend policy will be made at the discretion of our board of directors and will depend on a number of factors, including future earnings, capital requirements, financial conditions, future prospects, contractual restrictions and covenants and other factors that our board of directors may deem relevant.

DILUTION

If you purchase units in this Offering, you will experience dilution to the extent of the difference between the effective public offering price per share of common stock included in the Class A Units (or issuable upon the exercise of the Series V Warrants included in the Class B Units) and the net tangible book value per share of our common stock immediately after this Offering. Our net tangible book value as of June 30, 2019 was approximately \$(6.6) million, or \$(15.00) per share of our common stock, based upon 443,117 shares of our common stock outstanding. Net tangible book value per share is equal to our total tangible assets less our total liabilities, divided by the number of shares of our outstanding common stock.

After giving effect to the sale of Class A Units (or Class B Units) at a public offering of \$ per Class A Unit (or Class B Unit), and assuming the exercise of all Series V Warrants included in the Class B Units, no exercise of any of the Series U Warrants and no exercise of any option to purchase additional securities, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of June 30, 2019 would have been approximately \$ million, or \$ per share. This represents an immediate increase in net tangible book value of \$ per share to existing stockholders and immediate dilution of \$ per share to investors purchasing units in this Offering at the public offering price. The following table illustrates this per share dilution.

Public offering price per Class A Unit (or Class B Unit)		\$
Net tangible book value per share as of June 30, 2019	\$	(15.00)
Increase in as adjusted net tangible book value per share attributable to investors purchasing units in this Offering	\$	
As adjusted net tangible book value per share immediately after this Offering		
Dilution per share to investors purchasing units in this Offering		\$

If the underwriters exercise their option to purchase additional securities in full, our as adjusted net tangible book value per share after this offering would be \$ per share, the increase in net tangible book value to existing stockholders would be \$ per share and the dilution to investors purchasing units in this Offering at the public offering price would be \$ per share.

The above discussion and table are based on 443,117 shares outstanding as of June 30, 2019 and exclude:

- 5,303 shares of common stock issuable upon the exercise of stock options outstanding as of June 30, 2019 with a weighted average exercise price of \$1,776.99 per share;
- 1 share of common stock issuable upon the vesting of outstanding restricted stock awards as of June 30, 2019;
- 4,406 shares of common stock available for future grants under our 2014 Equity Incentive Plan as of June 30, 2019;
- 617 shares of common stock available for future grants under our 2015 New Employee Incentive Plan as of June 30, 2019;
- 6,673 shares of common stock issuable upon the conversion of outstanding shares of Series B Preferred Stock as of June 30, 2019;

- 87,904 shares of common stock issuable upon the conversion of outstanding shares of Series C Preferred Stock as of June 30, 2019;
- 177,727 shares of our common stock issuable upon the exercise of outstanding warrants as of June 30, 2019 with a weighted-average exercise price of \$81.19 per share;
- shares of our common stock issued between July 1, 2019 and _____, 2019 pursuant to our at-the-market sales agreement;
- shares of our common stock issued between July 1, 2019 and _____, 2019 pursuant to our Lincoln Park Capital Fund, LLC purchase agreement;
- the shares of our common stock issuable upon the exercise of the Warrants offered hereby; and
- the shares of our common stock issuable upon the exercise of the representative's warrants offered hereby.

To the extent outstanding stock options or warrants are exercised or outstanding shares of preferred stock are converted, you will experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that we raise additional capital by issuing equity or convertible debt securities, your ownership will be further diluted.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth information regarding ownership of our common stock as of August 31, 2019 (or an earlier date for information based on filings with the SEC) by (a) each person known to us to own more than 5% of the outstanding shares of our common stock, (b) each of our directors, (c) our president and chief executive officer and our two most highly compensated executive officers, other than our president and chief executive officer, who were serving as executive officers at the end of our last completed fiscal year and (d) all directors and executive officers as a group.

The information in this table is based solely on statements in filings with the SEC or other reliable information. We believe, based on information provided to us, that each of the stockholders listed below has sole voting and investment power with respect to the shares beneficially owned by the stockholder unless noted otherwise, subject to community property laws where applicable.

A total of 786,980 shares of our common stock were issued and outstanding as of August 31, 2019.

Name and Address of Beneficial Owner (1)	Number of Shares of Common Stock Owned (2)	Number of Shares of Common Stock Subject to Options/Warrants Exercisable Within 60 Days (3)	Total Number of Shares of Common Stock Beneficially Owned (4)	Percent Ownership
Tiago M. Girao (5)	28	—	28	*
John D. Harris (6)	—	—	—	—
Richard J. Hawkins	17	562	579	*
Marc H. Hedrick, M.D.	156	2,037	2,193	*
Gregg Lapointe	—	50	50	*
Ronald A. Martell	—	50	50	*
All executive officers and directors as a group	173	2,699	2,872	*

* Represents beneficial ownership of less than one percent (1%) of the outstanding shares as of August 31, 2019.

(1) Unless otherwise indicated, the address of each of the named individuals is c/o Plus Therapeutics, Inc., 4200 Marathon Blvd., Suite 200, Austin, Texas 78756.

(2) Unless otherwise indicated, represents shares of outstanding common stock owned by the named parties as of August 31, 2019.

(3) Shares of common stock subject to stock options or warrants currently exercisable or exercisable within 60 days of August 31, 2019 are deemed to be outstanding for computing the percentage ownership of the person holding such options or warrants and the percentage ownership of any group of which the holder is a member, but are not deemed outstanding for computing the percentage ownership of any other person.

(4) The amounts and percentages of common stock beneficially owned are reported on the basis of regulations of the SEC governing the determination of beneficial ownership of securities. Under the rules of the SEC, a person is deemed to be a “beneficial owner” of a security if that person has or shares “voting power,” which includes the power to vote or to direct the voting of such security, or “investment power,” which includes the power to dispose of or to direct the disposition of such security. A person is also deemed to be a beneficial owner of any securities for which that person has a right to acquire beneficial ownership within 60 days.

(5) Mr. Harris resigned from the Company effective May 1, 2018.

(6) Mr. Girao resigned from the Company effective March 31, 2019.

DESCRIPTION OF SECURITIES

In this Offering, we are offering for sale Class A Units and Class B Units. Each Class A Unit consists of one share of common stock and one Series U Warrant to purchase one share of common stock. Each Class B Unit consists of one Series V Warrant to purchase one share of common stock and one Series U Warrant to purchase one share of common stock. The shares of common stock and Warrants comprising the units are immediately separable and will be issued separately, but will be purchased together in this Offering. We are also registering the shares of common stock issuable upon exercise of the Warrants. These securities are being issued pursuant to an underwriting agreement between us and the representative of the underwriters. You should review the underwriting agreement and the forms of Series U Warrant and Series V Warrant, each filed as exhibits to the registration statement of which this prospectus is a part, for a complete description of the terms and conditions applicable to the Warrants. The following brief summary of the material terms and provisions of the Warrants is subject to, and qualified in its entirety by, the applicable form of Warrant.

Units

We are offering Class A Units, with each Class A Unit consisting of one share of common stock and one Series U Warrant to purchase one share of common stock at an exercise price per share of \$, together with the share of common stock underlying each Series U Warrant, at a public offering price of \$ per Class A Unit. The Class A Units will not be certificated and the shares of common stock and Series U Warrants comprising such units are immediately separable and will be issued separately, but will be purchased together in this Offering.

We are also offering to those purchasers whose purchase of Class A Units in this Offering would result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock following the consummation of this Offering, the opportunity to purchase, in lieu of the number of Class A Units that would result in ownership in excess of 4.99% (or, at the election of the purchaser, 9.99%), Class B Units. Each Class B Unit consists of one Series V Warrant to purchase one share of common stock at an exercise price per share of \$0.0001 and one Series U Warrant to purchase one share of common stock at an exercise price per share of \$, together with the share of common stock underlying each Warrant, at a public offering price of \$ per Class B Unit, which is the public offering price per Class A Unit minus \$0.0001. The Class B Units will not be certificated and the Series V Warrants and Series U Warrants comprising such units are immediately separable and will be issued separately, but will be purchased together in this Offering. The number of Class A Units sold in the offering shall be reduced on a one-to-one basis for each Class B Unit sold.

Description of Capital Stock

Our authorized capital stock consists of 100,000,000 shares of common stock, \$0.001 par value per share, and 5,000,000 shares of preferred stock, \$0.001 par value per share. Of our 5,000,000 shares of authorized preferred stock, 13,500 shares have been designated as Series A Preferred Stock, 10,000 have been designated as Series B Preferred Stock and 7,000 have been designated as Series C Preferred Stock.

Preferred Stock

We have 5,000,000 shares of authorized preferred stock, \$0.001 par value, 30,233 shares of which were issued and 3,355 of which were outstanding as of August 31, 2019. Of this amount, 13,500 shares have been designated Series A 3.6% Convertible Preferred Stock, none of which are outstanding, 10,000 shares have been designated Series B Convertible Preferred Stock, 1,026 shares of which are outstanding, and 6,723 shares have been designated Series C Convertible Preferred Stock, 2,329 shares of which are outstanding, in each case as of August 31, 2019. Our board of directors is authorized, without action by our stockholders, to classify or reclassify any unissued portion of our authorized shares of preferred stock to provide for the issuance of shares of other classes or series, including preferred stock in one or more series. Our board of directors may fix or alter the dividend rights, dividend rate, conversion

rights, voting rights, rights and terms of redemption (including sinking fund provisions), the redemption price or prices, the liquidation preferences of any wholly unissued series of preferred stock, and the number of shares constituting any such series and the designation thereof, or any of them. Our board of directors may also increase or decrease the number of shares of any series subsequent to the issue of shares of that series, but not below the number of shares of such series then outstanding. In case the number of shares of any series shall be so decreased, the shares constituting such decrease shall resume the status which they had prior to the adoption of the resolution originally fixing the number of shares of such series.

The transfer agent for each class of our preferred stock is Broadridge Corporate Issuer Solutions, Inc.

Series B Preferred Stock

Conversion. Each share of Series B Preferred Stock is convertible, at our option or at the option of the holder at any time, into the number of shares of our common stock determined by dividing the \$1,000 stated value per share of the Series B Preferred Stock by a conversion price of \$166.65 per share. In addition, the conversion price per share is subject to adjustment for stock dividends, distributions, subdivisions, combinations or reclassifications. Subject to limited exceptions, a holder of the Series B Preferred Stock will not have the right to convert any portion of the Series B Preferred Stock to the extent that, after giving effect to the conversion, the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of shares of our common stock outstanding immediately after giving effect to its conversion.

Fundamental Transactions. In the event we effect certain mergers, consolidations, sales of substantially all of our assets, tender or exchange offers, reclassifications or share exchanges in which our common stock is effectively converted into or exchanged for other securities, cash or property, we consummate a business combination in which another person acquires 50% of the outstanding shares of our common stock, or any person or group becomes the beneficial owner of 50% of the aggregate ordinary voting power represented by our issued and outstanding common stock, then, upon any subsequent conversion of the Series B Preferred Stock, the holders of the Series B Preferred Stock will have the right to receive any shares of the acquiring corporation or other consideration it would have been entitled to receive if it had been a holder of the number of shares of common stock then issuable upon conversion in full of the Series B Preferred Stock.

Dividends. Holders of Series B Preferred Stock are entitled to receive dividends (on an as-if-converted-to-common-stock basis) in the same form as dividends actually paid on shares of the common stock when, as and if such dividends are paid on shares of common stock.

Voting Rights. Except as otherwise provided in the certificate of designation for the Series B Preferred Stock or as otherwise required by law, the Series B Preferred Stock has no voting rights.

Liquidation Preference. Upon our liquidation, dissolution or winding-up, whether voluntary or involuntary, holders of Series B Preferred Stock will be entitled to receive out of our assets, whether capital or surplus, an amount equal to the \$1,000 stated value per share for each share of Series B Preferred Stock before any distribution or payment shall be made to the holders of any junior securities.

Redemption Rights. We are not obligated to redeem or repurchase any shares of Series B Preferred Stock. Shares of Series B Preferred Stock are not otherwise entitled to any redemption rights, or mandatory sinking fund or analogous fund provisions.

Series C Preferred Stock

Conversion. Each share of Series C Preferred Stock will be convertible, at our option at any time on or after July 25, 2020, subject to certain conditions, or at the option of the holder at any time, into the number of shares of our common stock determined by dividing the \$1,000 stated value per share of the Series C Preferred Stock by a conversion price of \$7.50. In addition, the conversion price per share is subject to adjustment for stock dividends, distributions, subdivisions, combinations or reclassifications. Subject to limited exceptions, a holder of the Series C Preferred Stock will not have the right to convert any portion of the Series C Preferred Stock to the extent that, after giving effect to the conversion, the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of shares of our common stock outstanding immediately after giving effect to its conversion.

Anti-Dilution. Subject to certain exceptions contained in the certificate of designation for the Series C Preferred Stock, including our ability to issue securities in connection with equity awards to service providers, strategic transactions, debt financings, research and development partnerships, an equity line of credit, our “at the market” equity offering program and other customary exceptions, if we issue or sell, or are deemed to have issued or sold, any shares of common stock or Common Stock Equivalents (as defined in the certificate of designation) for a consideration per share lower than the conversion price of the Series C Preferred Stock in effect immediately prior to such issuance or sale, or deemed issuance or sale, then the conversion price of the Series C Preferred Stock then in effect will be reduced to an amount equal to such lower price pursuant to the terms of the certificate of designation.

Fundamental Transactions. In the event we effect certain mergers, consolidations, sales of substantially all of our assets, tender or exchange offers, reclassifications or share exchanges in which our common stock is effectively converted into or exchanged for other securities, cash or property, we consummate a business combination in which another person acquires 50% of the outstanding shares of our common stock, or any person or group becomes the beneficial owner of 50% of the aggregate ordinary voting power represented by our issued and outstanding common stock, then, upon any subsequent conversion of the Series C Preferred Stock, the holders of the Series C Preferred Stock will have the right to receive any shares of the acquiring corporation or other consideration it would have been entitled to receive if it had been a holder of the number of shares of common stock then issuable upon conversion in full of the Series C Preferred Stock.

Dividends. Holders of Series C Preferred Stock are entitled to receive dividends (on an as-if-converted-to-common-stock basis) in the same form as dividends actually paid on shares of the common stock when, as and if such dividends are paid on shares of common stock.

Voting Rights. Except as otherwise provided in the certificate of designation or as otherwise required by law, the Series C Preferred Stock has no voting rights.

Liquidation Preference. Upon our liquidation, dissolution or winding-up, whether voluntary or involuntary, holders of Series C Preferred Stock will be entitled to receive out of our assets, whether capital or surplus, an amount equal to the \$1,000 stated value per share for each share of Series C Preferred Stock before any distribution or payment shall be made to the holders of any junior securities.

Redemption Rights. We are not obligated to redeem or repurchase any shares of Series C Preferred Stock. Shares of Series C Preferred Stock are not otherwise entitled to any redemption rights, or mandatory sinking fund or analogous fund provisions.

Warrants

Description of Series U Warrants Included in the Units

The material terms and provisions of the Series U Warrants being offered pursuant to this prospectus are summarized below. This summary of some provisions of the Series U Warrants is not complete. For the complete terms of the Series U Warrants, you should refer to the form of Series U Warrant filed as an exhibit to the registration statement of which this prospectus forms a part. The Series U Warrants that are purchased in the Offering as part of the units will be issued as separate warrant certificates.

Each Class A Unit and Class B Unit includes one Series U Warrant to purchase one share of common stock at an exercise price equal to \$ per share at any time for five years after the date of the closing of this Offering. The Series U Warrants issued in this Offering will be governed by the terms of such Series U Warrant and will be issued in certificated form. The holder of a Series U Warrant will not be deemed a holder of our underlying common stock until the Series U Warrant is exercised, except as set forth in the Series U Warrant.

Subject to certain limitations as described below, the Series U Warrants are immediately exercisable upon issuance on the closing date and expire on the five-year anniversary of the closing date. Pursuant to the terms of the Series U Warrants, a holder of Series U Warrants will not have the right to exercise any portion of its Series U Warrants if the holder (together with such holder's affiliates, and any persons acting as a group together with such holder or any of such holder's affiliates) would beneficially own a number of shares of common stock in excess of 4.99% (or, at the election of the purchaser prior to the date of issuance, 9.99%) (the "Beneficial Ownership Limitations") of the shares of our common stock then outstanding after giving effect to such exercise; provided, however, that upon notice to the Company, the holder may increase or decrease the Beneficial Ownership Limitation, provided that in no event shall the Beneficial Ownership Limitation exceed 9.99% and any increase in the Beneficial Ownership Limitation will not be effective until 61 days following notice of such increase from the holder to us.

The exercise price and the number of shares issuable upon exercise of the Series U Warrants is subject to appropriate adjustment in the event of recapitalization events, stock dividends, stock splits, stock combinations, reclassifications, reorganizations or similar events affecting our common stock. The Series U Warrant holders must pay the exercise price in cash upon exercise of the Series U Warrants, unless such Series U Warrant holders are utilizing the cashless exercise provision of the Series U Warrants.

In addition, in the event we consummate a merger or consolidation with or into another person or other reorganization event in which our common shares are converted or exchanged for securities, cash or other property, or we sell, lease, license, assign, transfer, convey or otherwise dispose of all or substantially all of our assets or we or another person acquire 50% or more of our outstanding shares of common stock, then following such event, the holders of the Series U Warrants will be entitled to receive upon exercise of such Series U Warrants the same kind and amount of securities, cash or property which the holders would have received had they exercised their Series U Warrants immediately prior to such fundamental transaction. Any successor to us or surviving entity shall assume the obligations under the Series U Warrants. In addition, in the event of a fundamental transaction, the holders of the Series U Warrants have the right to require us or a successor entity to redeem the Series U Warrants for cash in the amount of the Black-Scholes value of the unexercised portion of the Series U Warrants within 30 days of the date of the consummation of the fundamental transaction as described in the Series U Warrants.

Upon the holder's exercise of a Series U Warrant, we will issue the shares of common stock issuable upon exercise of the Series U Warrant within two trading days following our receipt of a notice of exercise, provided that payment of the exercise price has been made (unless exercised via the "cashless" exercise provision). Prior to the exercise of any Series U Warrants to purchase common stock, holders of the Series U Warrants will not have any of the rights of holders of the common stock purchasable upon exercise, including the right to vote, except as set forth therein.

We intend to use commercially reasonable efforts to have the registration statement, of which this prospectus forms a part, effective when the Series U Warrants are exercised. The Series U Warrant holders must pay the exercise price in cash upon exercise of the Series U Warrants, provided that, if there is not an effective registration statement, the Series U Warrants may be exercised via a “cashless” exercise provision in the Series U Warrants.

Description of Series V Warrants Included in the Class B Units

The material terms and provisions of the Series V Warrants being offered pursuant to this prospectus are summarized below. This summary of some provisions of the Series V Warrants is not complete. For the complete terms of the Series V Warrants, you should refer to the form of Series V Warrant filed as an exhibit to the registration statement of which this prospectus forms a part. The Series V Warrants that are purchased in the Offering as part of the units will be issued as separate warrant certificates.

Each Class B Unit includes one Series V Warrant to purchase one share of common stock at an exercise price equal to \$0.0001 per share at any time until the Series V Warrants are exercised in full. The Series V Warrants issued in this Offering will be governed by the terms of such Series V Warrant and will be issued in certificated form. The holder of a Series V Warrant will not be deemed a holder of our underlying common stock until the Series V Warrant is exercised, except as set forth in the Series V Warrant.

Subject to certain limitations as described below, the Series V Warrants are immediately exercisable upon issuance on the closing date and may be exercised at any time until the Series V Warrants are exercised in full. Pursuant to the terms of the Series V Warrants, a holder of Series V Warrants will not have the right to exercise any portion of its Series V Warrants if the holder (together with such holder’s affiliates, and any persons acting as a group together with such holder or any of such holder’s affiliates) would beneficially own a number of shares of common stock in excess of 4.99% (or, at the election of the purchaser prior to the date of issuance, 9.99%) of the shares of our common stock then outstanding after giving effect to such exercise; provided, however, that upon notice to the Company, the holder may increase or decrease the Beneficial Ownership Limitation; provided that in no event shall the Beneficial Ownership Limitation exceed 9.99% and any increase in the Beneficial Ownership Limitation will not be effective until 61 days following notice of such increase from the holder to us.

The exercise price and the number of shares issuable upon exercise of the Series V Warrants is subject to appropriate adjustment in the event of recapitalization events, stock dividends, stock splits, stock combinations, reclassifications, reorganizations or similar events affecting our common stock. The Series V Warrant holders must pay the exercise price in cash upon exercise of the Series V Warrants, unless such Series V Warrant holders are utilizing the cashless exercise provision of the Series V Warrants.

In addition, in the event we consummate a merger or consolidation with or into another person or other reorganization event in which our common shares are converted or exchanged for securities, cash or other property, or we sell, lease, license, assign, transfer, convey or otherwise dispose of all or substantially all of our assets or we or another person acquire 50% or more of our outstanding shares of common stock, then following such event, the holders of the Series V Warrants will be entitled to receive upon exercise of such Series V Warrants the same kind and amount of securities, cash or property which the holders would have received had they exercised their Series V Warrants immediately prior to such fundamental transaction. Any successor to us or surviving entity shall assume the obligations under the Series V Warrants.

Upon the holder’s exercise of a Series V Warrant, we will issue the shares of common stock issuable upon exercise of the Series V Warrant within two trading days following our receipt of a notice of exercise, provided that payment of the exercise price has been made (unless exercised via the “cashless” exercise provision). Prior to the exercise of any Series V Warrants to purchase common stock, holders of the Series V Warrants will not have any of the rights of holders of the common stock purchasable upon exercise, including the right to vote, except as set forth therein.

We intend to use commercially reasonable efforts to have the registration statement, of which this prospectus forms a part, effective when the Series V Warrants are exercised. At the election of the Series V Warrant holder, in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, such holder may elect instead, at any time until the Series V Warrants are exercised in full, to exercise via a “cashless” exercise provision and to receive upon such exercise (either in whole or in part) the net number of shares of common stock determined according to a formula set forth in the Series V Warrants.

Common Stock

This section describes the general terms and provisions of the shares of our common stock, \$0.001 par value. This description is only a summary and is qualified in its entirety by reference to the description of our common stock included in our amended and restated certificate of incorporation, as amended, and our amended and restated bylaws, as amended, which have been filed as exhibits to the registration statement of which this prospectus is a part. You should read our amended and restated certificate of incorporation and our amended and restated bylaws for additional information before you buy any of our common stock or other securities. See “Where You Can Find More Information” and “Incorporation by Reference.”

We have 100,000,000 shares of authorized common stock. As of August 31, 2019, there were 786,980 shares of common stock issued and outstanding, warrants to purchase 177,727 shares of common stock outstanding, options to purchase 5,303 shares of common stock outstanding and 1 share of common stock issuable upon vesting of restricted stock awards. The holders of common stock possess exclusive voting rights in us, except to the extent our board of directors specifies voting power with respect to any other class of securities issued in the future. Each holder of our common stock is entitled to one vote for each share held of record on each matter submitted to a vote of stockholders, including the election of directors. Stockholders do not have any right to cumulate votes in the election of directors.

Subject to preferences that may be granted to the holders of preferred stock, each holder of our common stock is entitled to share ratably in distributions to stockholders and to receive ratably such dividends as may be declared by our board of directors out of funds legally available therefor. In the event of our liquidation, dissolution or winding up, the holders of our common stock will be entitled to receive, after payment of all of our debts and liabilities and of all sums to which holders of any preferred stock may be entitled, the distribution of any of our remaining assets. Holders of our common stock have no conversion, exchange, sinking fund, redemption or appraisal rights (other than such as may be determined by our board of directors in its sole discretion) and have no preemptive rights to subscribe for any of our securities.

All of the outstanding shares of our common stock are, and the shares of common stock issued upon the conversion of any securities convertible into our common stock will be, fully paid and non-assessable. The shares of common stock offered by this prospectus or upon the conversion of any preferred stock or debt securities or exercise of any Warrants offered pursuant to this prospectus, when issued and paid for, will also be, fully paid and non-assessable.

Our common stock is listed on Nasdaq under the symbol “PSTV.”

Delaware Anti-Takeover Statute

We are subject to Section 203 of the DGCL, an anti-takeover statute. In general, Section 203 of the DGCL prohibits a publicly held Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years following the time the person became an interested stockholder, unless the business combination or the acquisition of shares that resulted in a stockholder becoming an interested stockholder is approved in a prescribed manner. Generally, a “business combination” includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. Generally, an “interested stockholder” is a person who, together with affiliates and associates, owns (or within three years prior to the determination of interested stockholder status did own) 15% or more of a corporation’s voting stock. The existence of this provision would be expected to have an anti-takeover effect with respect to transactions not approved in advance by our board of directors, including discouraging attempts that might result in a premium over the market price for the shares of common stock held by our stockholders.

Board Vacancies

Our amended and restated bylaws provide that any vacancy or vacancies in our board of directors shall be deemed to exist in the case of the death, resignation or removal of any director, or if the authorized number of directors be increased. Vacancies may be filled by a majority of the remaining directors, though less than a quorum, or by a sole remaining director, unless otherwise provided in our amended and restated of incorporation, as amended. The stockholders may elect a director or directors at any time to fill any vacancy or vacancies not filled by the directors.

Undesignated Preferred Stock

The authority possessed by our board of directors to issue preferred stock could potentially be used to discourage attempts by third parties to obtain control of our company through a merger, tender offer, proxy contest or otherwise by making such attempts more difficult or more costly. Our board of directors may issue preferred stock with voting rights or conversion rights that, if exercised, could adversely affect the voting power of the holders of our common stock.

Special Meeting Requirements

Our amended and restated bylaws provide that special meetings of our stockholders may only be called at the request of our president, chief executive officer or chairman of the board or by a majority of our Board of Directors.

No Cumulative Voting

The DGCL provides that stockholders are denied the right to cumulate votes in the election of directors unless our amended and restated of incorporation, as amended, provides otherwise. Our amended and restated of incorporation does not provide for cumulative voting.

Authorized but Unissued Shares

Our authorized but unissued shares of common stock and preferred stock will be available for future issuance without stockholder approval. We may use additional shares for a variety of purposes, including future public offerings to raise additional capital, to fund acquisitions and as employee compensation. The existence of authorized but unissued shares of common stock and preferred stock could render more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise.

The above provisions may deter a hostile takeover or delay a change in control or management of us.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Broadridge Corporate Issuer Solutions, Inc.

U.S. Tax Consequences

In the event of an adjustment (or nonoccurrence of an adjustment) to the exercise price or the number of shares or other consideration for which a Warrant may be exercised, the holders of the Warrants may, in certain circumstances, be deemed to have received a distribution subject to U.S. federal income tax as a dividend. See “Certain Material U.S. Federal Income Tax Considerations.” Because this deemed income would not give rise to any cash from which any applicable withholding tax could be satisfied, if withholding taxes (including backup withholding taxes) are paid on behalf of a holder, those withholding taxes may be set off against any cash or shares received pursuant to the warrants or pre-funded warrants (or, in some circumstances, against any payments on the shares).

UNDERWRITING

We have entered into an underwriting agreement dated _____, 2019 with H.C. Wainwright & Co., LLC (the “representative”) as the representative of the underwriters named below and the sole book-running manager of this Offering. Subject to the terms and conditions of the underwriting agreement, the underwriters have agreed to purchase the number of our securities set forth opposite their names below.

<u>Underwriters</u>	<u>Class A Units</u>	<u>Class B Units</u>
H.C. Wainwright & Co., LLC		
Total		

A copy of the underwriting agreement will be filed as an exhibit to the registration statement of which this prospectus is a part.

We have been advised by the underwriters that they propose to offer the securities directly to the public at the public offering prices set forth on the cover page of this prospectus. Any securities sold by the underwriters to securities dealers will be sold at the public offering price less a selling concession not in excess of \$ _____ per share and \$ _____ per Series U Warrant.

The underwriting agreement provides that subject to the satisfaction or waiver by the underwriters of the conditions contained in the underwriting agreement, the underwriters are obligated to purchase and pay for all of the securities offered by this prospectus.

No action has been taken by us or the underwriters that would permit a public offering of the units in any jurisdiction outside the United States where action for that purpose is required. None of our securities included in this Offering may be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sales of any of the securities offered hereby be distributed or published in any jurisdiction except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons who receive this prospectus are advised to inform themselves about and to observe any restrictions relating to this Offering of securities and the distribution of this prospectus. This prospectus is neither an offer to sell nor a solicitation of any offer to buy the securities in any jurisdiction where that would not be permitted or legal.

The underwriters have advised us that they do not intend to confirm sales to any account over which they exercise discretionary authority.

Underwriting Discount and Expenses

The following table summarizes the underwriting discount and commission to be paid to the underwriters by us.

	Per Class A Unit	Per Class B Unit	Total Without Option Exercise	Total With Full Option Exercise
Public offering price				
Underwriting discount to be paid to the underwriters by us (7.0%)				
Proceeds to us (before expenses)				

We estimate the total expenses payable by us for this Offering to be approximately \$ _____ which amount includes (i) the underwriting discount of \$ _____, (ii) the reimbursement of the representative’s accountable expenses, including

its legal fees, in the amount of \$100,000, (iii) the reimbursement of the representative's non-accountable expenses in the amount of \$25,000, (iv) the reimbursement of the representative's clearing expenses in the amount of \$10,000, and (v) other estimated company expenses of approximately \$, which includes legal accounting printing costs and various fees associated with the registration of our securities.

Option to Purchase Additional Securities

We have granted to the underwriters an option, exercisable not later than 45 days after the date of this prospectus, to purchase up to a number of an additional shares and/or additional Series U Warrants (equal to 15% of the shares (including the number of shares of common stock underlying the Series V Warrants) and 15% of the Series U Warrants sold in this offering) in any combination thereof. Any shares of common stock and/or Series U Warrants so purchased shall be sold at the public offering price per share and per Series U Warrant, less the underwriting discounts and commissions, set forth on the cover page of this prospectus. If any additional shares and/or Series U Warrants are purchased pursuant to this option, the underwriters will offer these additional shares and/or Series U Warrants on the same terms as those on which the other securities are being offered hereby.

Representative Warrants

In addition, we have agreed to issue to the representative or its designees warrants to purchase a number of shares of common stock equal to 2.5% of the aggregate number of shares of common stock in the offering (including the shares underlying the Series V Warrants in this offering and including shares of common stock issued upon exercise of the underwriters' option to purchase additional securities) with an exercise price of \$ per share (or 125% of the public offering price per share of common stock in this offering). The representative's warrants will be exercisable immediately and will terminate five years from the effective date of the registration statement of which this prospectus forms a part and will be in the form of the Series U Warrants except as required by FINRA. Pursuant to FINRA Rule 5110(g), the representative's warrants and any shares issued upon exercise of the representative's warrants shall not be sold, transferred, assigned, pledged, or hypothecated, or be the subject of any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of the securities by any person for a period of 180 days immediately following the date of effectiveness or commencement of sales of this offering, except the transfer of any security: (i) by operation of law or by reason of our reorganization; (ii) to any FINRA member firm participating in the offering and the officers or partners thereof, if all securities so transferred remain subject to the lock-up restriction set forth above for the remainder of the time period; (iii) if the aggregate amount of our securities held by the underwriter or related persons do not exceed 1% of the securities being offered; (iv) that is beneficially owned on a pro-rata basis by all equity owners of an investment fund, provided that no participating member manages or otherwise directs investments by the fund and the participating members in the aggregate do not own more than 10% of the equity in the fund; or (v) the exercise or conversion of any security, if all securities remain subject to the lock-up restriction set forth above for the remainder of the time period. The representative's warrants are registered on the registration statement of which this prospectus is a part.

Upon the consummation of this offering, we have granted the representative a right of first refusal to act as sole book-running manager, sole underwriter or sole placement agent in connection with any public or private offering of equity or equity-linked securities or other capital-raising financing by us, subject to certain exceptions, which right extends for six months or twelve months, depending on the aggregate proceeds in this offering, from the closing date of this offering.

The representative shall also be entitled to the foregoing cash commission and warrant compensation with respect to investors contacted by or introduced to us by the representative during the term of our engagement of the representative that participate in a public or private offering or capital-raising transaction during the three month period following the termination of our engagement of the representative.

Determination of Offering Price

Our common stock is currently traded on the Nasdaq Capital Market under the symbol "PSTV." On September 9, 2019, the closing price of our common stock was \$10.78 per share. We do not intend to apply for listing of the Series U Warrants or Series V Warrants on any securities exchange or other trading system.

The public offering prices of the securities offered by this prospectus will be determined by negotiation between us and the underwriters. Among the factors considered in determining the public offering prices of the Series U Warrants and Series V Warrants were:

- our history and our prospects;
- the industry in which we operate;
- our past and present operating results;
- the previous experience of our executive officers; and
- the general condition of the securities markets at the time of this Offering.

The offering price stated on the cover page of this prospectus should not be considered an indication of the actual value of the securities sold in this Offering. That price is subject to change as a result of market conditions and other factors and we cannot assure you that the Series U Warrants or Series V Warrants sold in this Offering can be resold at or above the public offering price.

Lock-up Agreements

Our officers, directors and each of their respective affiliates and associated persons have agreed with the representative to be subject to a lock-up period of ninety (90) days following the date of this prospectus. This means that, during the applicable lock-up period, such persons may not offer for sale, contract to sell, sell, distribute, grant any option, right or warrant to purchase, pledge, hypothecate or otherwise dispose of, directly or indirectly, any shares of our common stock or any securities convertible into, or exercisable or exchangeable for, shares of our common stock. Certain limited transfers are permitted during the lock-up period if the transferee agrees to these lock-up restrictions.

We have also agreed, in the underwriting agreement, to similar lock-up restrictions on the issuance and sale of our securities for ninety (90) days following the closing of this Offering, although we will be permitted to issue stock options or stock awards to directors, officers and employees under our existing plans, and have agreed to a restriction on the issuance of any variable priced securities for twelve (12) months following the closing of this offering. The representative may, in its sole discretion and without notice, waive the terms of any of these lock-up agreements.

Stabilization, Short Positions and Penalty Bids

In connection with this offering, the underwriters may engage in stabilizing transactions, over-allotment transactions, syndicate covering transactions and penalty bids in connection with our common stock.

Over-allotment transactions involve sales by the underwriters of shares of common stock in excess of the number of shares the underwriters are obligated to purchase. This creates a syndicate short position which may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by the underwriters is not greater than the number of shares that they may purchase in the option to purchase additional securities. In a naked short position, the number of shares involved is greater than the number of shares in the option to purchase additional securities. The underwriters may close out any short position by exercising its option to purchase additional securities and/or purchasing shares in the open market.

Stabilizing transactions permit bids to purchase shares of common stock so long as the stabilizing bids do not exceed a specified maximum.

Syndicate covering transactions involve purchases of common stock in the open market after the distribution has been completed in order to cover syndicate short positions. Such a naked short position would be closed out by buying securities in the open market. A naked short position is more likely to be created if the underwriters are concerned that there could be downward pressure on the price of the securities in the open market after pricing that could adversely affect investors who purchase in the offering.

Penalty bids permit the underwriters to reclaim a selling concession from a syndicate member when the securities originally sold by the syndicate member are purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

In connection with this offering, the underwriters also may engage in passive market making transactions in our common stock in accordance with Regulation M during a period before the commencement of offers or sales of shares of our common stock in this offering and extending through the completion of the distribution. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for that security. However, if all independent bids are lowered below the passive market maker's bid that bid must then be lowered when specific purchase limits are exceeded. Passive market making may stabilize the market price of the securities at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

Neither we nor the underwriters make any representations or predictions as to the direction or magnitude of any effect that the transactions described above may have on the prices of our securities. In addition, neither we nor the underwriters make any representations that the underwriters will engage in these transactions or that any transactions, once commenced will not be discontinued without notice.

Indemnification

We have agreed to indemnify the underwriters against certain liabilities, including certain liabilities arising under the Securities Act, or to contribute to payments that the underwriters may be required to make for these liabilities.

Other Relationships

The representative and its affiliates have engaged in, and may in the future engage in, investment banking and other commercial dealings in the ordinary course of business with us or our affiliates. The representative has received, or may in the future receive, customary fees and commissions for these transactions.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Broadridge Corporate Issuer Solutions, Inc.

CERTAIN MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS

The following discussion is a summary of the material U.S. federal income tax consequences of the purchase, ownership and disposition of the Class A Units or components thereof and the Class B Units or components thereof, which we refer to collectively as the Units, issued pursuant to this offering and shares of our common stock received upon the exercise of the Warrants, but does not purport to be a complete analysis of all potential tax effects. The effects of other U.S. federal tax laws, such as estate and gift tax laws, and any applicable state, local or non-U.S. tax laws are not discussed. This discussion is based on the U.S. Internal Revenue Code of 1986, as amended, or Code, Treasury Regulations promulgated thereunder, judicial decisions, and published rulings and administrative pronouncements of the U.S. Internal Revenue Service, or IRS, in each case in effect as of the date hereof. These authorities may change or be subject to differing interpretations. Any such change or differing interpretation may be applied retroactively in a manner that could adversely affect a holder of Warrants or shares of our common stock. We have not sought and will not seek any rulings from the IRS regarding the matters discussed below. There can be no assurance the IRS or a court will not take a contrary position to that discussed below regarding the tax consequences of the acquisition, ownership and disposition of the Units and shares of our common stock received upon the exercise of the Warrants.

This discussion is limited to holders that hold Warrants or shares of our common stock as a “capital asset” within the meaning of Section 1221 of the Code (generally, property held for investment). This discussion does not address all U.S. federal income tax consequences relevant to a holder’s particular circumstances, including the impact of the alternative minimum tax or the unearned income Medicare contribution tax. In addition, it does not address consequences relevant to holders subject to particular rules, including, without limitation:

- U.S. expatriates and former citizens or long-term residents of the United States;
- persons holding Warrants or shares of our common stock as part of a hedge, straddle or other risk reduction strategy or as part of a conversion transaction or other integrated investment;
- banks, insurance companies, and other financial institutions;
- brokers, dealers or traders in securities;
- “controlled foreign corporations,” “passive foreign investment companies,” and corporations that accumulate earnings to avoid U.S. federal income tax;
- entities or arrangements treated as partnerships for U.S. federal income tax purposes (and investors therein);
- tax-exempt organizations or governmental organizations;
- persons deemed to sell Warrants or shares of our common stock under the constructive sale provisions of the Code;
- persons subject to special tax accounting rules as a result of any item of gross income with respect to Warrants or shares of our common stock being taken into account in an “applicable financial statement” (as defined in the Code);
- persons for whom our stock constitutes “qualified small business stock” within the meaning of Section 1202 of the Code;
- persons who hold or receive Warrants or shares of our common stock pursuant to the exercise of any employee stock option or otherwise as compensation; and
- tax-qualified retirement plans.

If an entity treated as a partnership for U.S. federal income tax purposes holds Warrants or shares of our common stock, the tax treatment of a partner in the partnership will depend on the status of the partner, the activities of the partnership and certain determinations made at the partner level. Accordingly, partnerships and the partners in such partnerships should consult their tax advisors regarding the U.S. federal income tax consequences to them.

THIS DISCUSSION IS FOR INFORMATION PURPOSES ONLY AND IS NOT TAX ADVICE. INVESTORS SHOULD CONSULT THEIR TAX ADVISORS WITH RESPECT TO THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AS WELL AS ANY TAX CONSEQUENCES OF THE ACQUISITION, OWNERSHIP, AND DISPOSITION OF UNITS AND SHARES OF OUR COMMON STOCK RECEIVED UPON THE EXERCISE OF THE WARRANTS ARISING UNDER THE U.S. FEDERAL ESTATE OR GIFT TAX LAWS OR UNDER THE LAWS OF ANY STATE, LOCAL OR NON-U.S. TAXING JURISDICTION OR UNDER ANY APPLICABLE INCOME TAX TREATY.

Characterization of Units

Each Class A Unit will be treated for U.S. federal income tax purposes as an investment unit consisting of one share of our common stock and one Series U Warrant to purchase one share of common stock. Each Class B Unit will be treated for U.S. federal income tax purposes as an investment unit consisting of one Series V Warrant and one Series U Warrant to purchase one share of our common stock. In determining their tax basis for the common stock and the Series U Warrant composing the Class A Unit or their tax basis for the Series V Warrant and the Series U Warrant composing the Class B Unit, purchasers of Units should allocate their purchase price for the applicable Unit between the components on the basis of their relative fair market values at the time of issuance. We do not intend to advise purchasers of the Units with respect to this determination, and purchasers of the Units are advised to consult their tax and financial advisors with respect to the relative fair market values of the common stock and the Warrants for U.S. federal income tax purposes.

Treatment of Series V Warrants

Although not free from doubt, a Series V Warrant should be treated as a share of our common stock for U.S. federal income tax purposes, and a holder of Series V Warrants should generally be taxed in the same manner as a holder of common stock, as described below. Accordingly, no gain or loss should be recognized (other than with respect to cash paid in lieu of a fractional share) upon the exercise of a Series V Warrant and, upon exercise, the holding period of a Series V Warrant should carry over to the share of common stock received. Similarly, the tax basis of the Series V Warrants should carry over to the share of common stock received upon exercise, increased by the exercise price of \$0.001. The discussion below assumes the characterization described above is respected for U.S. federal income tax purposes. Holders should consult their tax advisors regarding the risks associated with the acquisition of Series V Warrants pursuant to this offering (including alternative characterizations).

Tax Considerations Applicable to U.S. Holders

Definition of a U.S. Holder

For purposes of this discussion, a “U.S. holder” is any beneficial owner Warrants or shares of our common stock that, for U.S. federal income tax purposes, is:

- an individual who is a citizen or resident of the United States;
- a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) created or organized under the laws of the United States, any state thereof, or the District of Columbia;

- an estate, the income of which is subject to U.S. federal income tax regardless of its source; or
- a trust that (1) is subject to the primary supervision of a U.S. court and the control of one or more United States persons (within the meaning of Section 7701(a)(30) of the Code), or (2) has made a valid election under applicable Treasury Regulations to continue to be treated as a United States person.

Sale or Other Disposition, Exercise or Expiration of Series U Warrants

Upon the sale, redemption or other disposition of a Series U Warrant (other than by exercise), a U.S. holder will generally recognize capital gain or loss equal to the difference between the amount realized on the sale or other disposition and the U.S. holder's tax basis in the Series U Warrant. This capital gain or loss will be long-term capital gain or loss if the U.S. holder's holding period in such Warrant is more than one year at the time of the sale or other disposition. The deductibility of capital losses is subject to certain limitations.

In general, a U.S. holder will not be required to recognize income, gain or loss upon exercise of a Series U Warrant for its exercise price. A U.S. holder's tax basis in a share of our common stock received upon exercise of the Series U Warrants will be equal to the sum of (1) the U.S. holder's tax basis in the Series U Warrants exchanged therefor and (2) the exercise price of such Series U Warrants. A U.S. holder's holding period in the shares of our common stock received upon exercise will commence on the day after such U.S. holder exercises the Series U Warrants. Although there is no direct legal authority as to the U.S. federal income tax treatment of an exercise of a Warrant on a cashless basis, we intend to take the position that such exercise will not be taxable, either because the exercise is not a gain realization event or because it qualifies as a tax-free recapitalization. In the former case, the holding period of the shares of our common stock received upon exercise of Series U Warrants should commence on the day after the Series U Warrants are exercised. In the latter case, the holding period of the shares of our common stock received upon exercise of Series U Warrants would include the holding period of the exercised Series U Warrants. However, our position is not binding on the IRS, and the IRS may treat a cashless exercise of a Series U Warrant as a taxable exchange. U.S. holders are urged to consult their tax advisors as to the consequences of an exercise of a Series U Warrant on a cashless basis, including with respect to their holding period and tax basis in the common stock received.

If a Series U Warrant expires without being exercised, a U.S. holder will recognize a capital loss in an amount equal to such holder's tax basis in the Series U Warrant. Such loss will be long-term capital loss if, at the time of the expiration, the U.S. holder's holding period in such Series U Warrant is more than one year. The deductibility of capital losses is subject to certain limitations.

Constructive Dividends on Warrants

As described in the section entitled "Dividend Policy," we do not anticipate declaring or paying dividends to holders of our common stock in the foreseeable future. However, if the exercise price of the Warrants is adjusted as a result of certain events affecting our common stock (or in certain circumstances, there is a failure to make adjustments), such adjustments may result in the deemed payment of a taxable dividend to a U.S. holder. U.S. holders should consult their tax advisors regarding the proper treatment of any adjustments to the exercise price of the Warrants.

We are currently required to report the amount of any deemed distributions on our website or to the IRS and to holders not exempt from reporting. The IRS proposed regulations addressing the amount and timing of deemed distributions, as well as, obligations of withholding agents and filing and notice obligations of issuers in respect of such deemed distributions. If adopted as proposed, the regulations would generally provide that (i) the amount of a deemed distribution is the excess of the fair market value of the right to acquire stock immediately after the exercise price adjustment over the fair market value of the right to acquire stock (after the exercise price adjustment) without the adjustment, (ii) the deemed distribution occurs at the earlier of the date the adjustment occurs under the terms of the instrument and the date of the actual distribution of cash or property that results in the deemed distribution and (iii) we are required to report the amount of any deemed distributions on our website or to the IRS and to all holders (including holders that would otherwise be exempt from reporting). The final regulations will be effective for deemed distributions occurring on or after the date of adoption, but holders and withholding agents may rely on them prior to that date under certain circumstances.

Distributions on Common Stock or Series V Warrants

As described in the section entitled “Dividend Policy,” we do not anticipate declaring or paying dividends to holders of our common stock or Series V Warrants in the foreseeable future. However, if we do make distributions of cash or property on our common stock or Series V Warrants, such distributions will constitute dividends to the extent paid out of our current or accumulated earnings and profits, as determined for U.S. federal income tax purposes. Dividends received by a corporate U.S. holder may be eligible for a dividends received deduction, subject to applicable limitations. Dividends received by certain non-corporate U.S. holders, including individuals, are generally taxed at the lower applicable capital gains rate provided certain holding period and other requirements are satisfied. Distributions in excess of our current and accumulated earnings and profits will constitute a return of capital and first be applied against and reduce a U.S. holder’s adjusted tax basis in its common stock or Series V Warrants, as the case may be, but not below zero. Any excess will be treated as capital gain and will be treated as described below in the section relating to the sale or disposition of our common stock or Series V Warrants, as applicable.

Sale, Exchange or Other Disposition of Common Stock or Series V Warrants

Upon a sale, exchange, or other disposition of our common stock, a U.S. holder generally will recognize capital gain or loss equal to the difference between the amount realized (not including any amount attributable to declared and unpaid dividends, which will be taxable as described above to U.S. holders of record who have not previously included such dividends in income) and the U.S. holder’s adjusted tax basis in our common stock or Series V Warrant. A U.S. holder’s adjusted tax basis in our common stock or Series V Warrant generally will equal (i) its cost for the common stock or Series V Warrant (in the case of common stock or Series V Warrant acquired in this offering) or (ii) the sum of (A) its tax basis in a Series V Warrant and (B) the exercise price of the Series V Warrant (in the case of common stock acquired upon exercise of the Warrant and as discussed above under “—Treatment of Series V Warrants” and “—Sale or Other Disposition, Exercise or Expiration of Warrants”), reduced by the amount of any cash distributions treated as a return of capital as described above. Such capital gain or loss generally will be long-term capital gain or loss if the U.S. holder’s holding period for our common stock or Series V Warrant exceeded one year at the time of disposition. Long-term capital gains recognized by certain non-corporate U.S. Holders, including individuals, generally are subject to reduced rates of taxation. The deductibility of capital losses is subject to limitations.

Information Reporting and Backup Withholding

A U.S. holder may be subject to information reporting and backup withholding when such holder receives payments (including constructive dividends) or receives proceeds from the sale or other taxable disposition of Warrants or shares of our common stock. Certain U.S. holders are exempt from backup withholding, including corporations and certain tax-exempt organizations. A U.S. holder will be subject to backup withholding if such holder is not otherwise exempt and such holder:

- fails to furnish the holder's taxpayer identification number, which for an individual is ordinarily his or her social security number;
- furnishes an incorrect taxpayer identification number;
- is notified by the IRS that the holder previously failed to properly report payments of interest or dividends; or
- fails to certify under penalties of perjury that the holder has furnished a correct taxpayer identification number and that the IRS has not notified the holder that the holder is subject to backup withholding.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a U.S. holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS. U.S. holders should consult their tax advisors regarding their qualification for an exemption from backup withholding and the procedures for obtaining such an exemption.

Tax Considerations Applicable to Non-U.S. Holders

For purposes of this discussion, a "non-U.S. holder" is a beneficial owner of Warrants or shares of our common stock that is neither a U.S. holder nor an entity treated as a partnership for U.S. federal income tax purposes.

Exercise of Warrants

A non-U.S. holder generally will not be subject to U.S. federal income tax on the exercise of Warrants into shares of our common stock. However, if a cashless exercise of the Warrants results in a taxable exchange, as described in "— Tax Considerations Applicable to U.S. holders — Sale or Other Disposition, Exercise or Expiration of Warrants," the rules described below under "Sale or Other Disposition of Common Stock or Warrants" would apply.

Constructive Dividends on Warrants

As described in the section entitled "Dividend Policy," we do not anticipate declaring or paying dividends to holders of our common stock in the foreseeable future. However, if the exercise price is adjusted as a result of certain events affecting our common stock (or in certain circumstances, there is a failure to make adjustments), such adjustments may result in the deemed payment of a taxable dividend to a U.S. holder. Any resulting withholding tax attributable to deemed dividends may be collected from other amounts payable or distributable to, or other assets of, the non-U.S. holder. Non-U.S. holders should consult their tax advisors regarding the proper treatment of any adjustments to the Warrants.

Distributions on Common Stock or Series V Warrants

As described in the section entitled “Dividend Policy,” we do not anticipate declaring or paying dividends to holders of our common stock or Series V Warrants in the foreseeable future. However, if we do make distributions of cash or property on our common stock or Series V Warrants, such distributions will constitute dividends for U.S. federal income tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. Amounts not treated as dividends for U.S. federal income tax purposes will constitute a return of capital and first be applied against and reduce a non-U.S. holder’s adjusted tax basis in its common stock or Series V Warrants, as the case may be, but not below zero. Any excess will be treated as capital gain and will be treated as described below in the section relating to the sale or disposition of our common stock or Series V Warrants. Because we may not know the extent to which a distribution is a dividend for U.S. federal income tax purposes at the time it is made, for purposes of the withholding rules discussed below we or the applicable withholding agent may treat the entire distribution as a dividend.

Subject to the discussion below on backup withholding and foreign accounts, dividends paid to a non- U.S. holder of our common stock or Series V Warrants that are not effectively connected with the non-U.S. holder’s conduct of a trade or business within the United States will be subject to U.S. federal withholding tax at a rate of 30% of the gross amount of the dividends (or such lower rate specified by an applicable income tax treaty).

Non-U.S. holders will be entitled to a reduction in or an exemption from withholding on dividends as a result of either (a) an applicable income tax treaty or (b) the non-U.S. holder holding our common stock or Series V Warrants in connection with the conduct of a trade or business within the United States and dividends being effectively connected with that trade or business. To claim such a reduction in or exemption from withholding, the non-U.S. holder must provide the applicable withholding agent with a properly executed (a) IRS Form W-8BEN or W-8BEN-E (or other applicable documentation) claiming an exemption from or reduction of the withholding tax under the benefit of an income tax treaty between the United States and the country in which the non-U.S. holder resides or is established, or (b) IRS Form W-8ECI stating that the dividends are not subject to withholding tax because they are effectively connected with the conduct by the non-U.S. holder of a trade or business within the United States, as may be applicable. These certifications must be provided to the applicable withholding agent prior to the payment of dividends and must be updated periodically. Non-U.S. holders that do not timely provide the applicable withholding agent with the required certification, but that qualify for a reduced rate under an applicable income tax treaty, may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS.

If dividends paid to a non-U.S. holder are effectively connected with the non-U.S. holder’s conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the non-U.S. holder maintains a permanent establishment in the United States to which such dividends are attributable), then, although exempt from U.S. federal withholding tax (provided the non-U.S. holder provides appropriate certification, as described above), the non-U.S. holder will be subject to U.S. federal income tax on such dividends on a net income basis at the regular graduated U.S. federal income tax rates. In addition, a non-U.S. holder that is a corporation may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on its effectively connected earnings and profits for the taxable year that are attributable to such dividends, as adjusted for certain items. Non-U.S. holders should consult their tax advisors regarding their entitlement to benefits under any applicable income tax treaty.

Sale or Other Disposition of Common Stock or Warrants

Subject to the discussions below on backup withholding and foreign accounts, a non-U.S. holder will not be subject to U.S. federal income tax on any gain realized upon the sale, redemption or other taxable disposition of our Warrants or our common stock unless:

- the gain is effectively connected with the non-U.S. holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, the non-U.S. holder maintains a permanent establishment in the United States to which such gain is attributable);
- the non-U.S. holder is a nonresident alien individual present in the United States for 183 days or more during the taxable year of the disposition and certain other requirements are met; or
- our Warrants or our common stock constitute a U.S. real property interest, or USRPI, by reason of our status as a U.S. real property holding corporation, or USRPHC, for U.S. federal income tax purposes.

Gain described in the first bullet point above generally will be subject to U.S. federal income tax on a net income basis at the regular graduated rates. A Non-U.S. holder that is a corporation also may be subject to a branch profits tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on such effectively connected earnings and profits, as adjusted for certain items.

Gain described in the second bullet point above will be subject to U.S. federal income tax at a rate of 30% (or such lower rate specified by an applicable income tax treaty) on any gain derived from the disposition, which may be offset by U.S. source capital losses of the non-U.S. holder (even though the individual is not considered a resident of the United States), provided the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses.

With respect to the third bullet point above, we believe we are not currently and do not anticipate becoming a USRPHC. Because the determination of whether we are a USRPHC depends on the fair market value of our USRPIs relative to the fair market value of our other business assets and our non-U.S. real property interests, however, there can be no assurance we are not a USRPHC or will not become one in the future.

Non-U.S. holders should consult their tax advisors regarding potentially applicable income tax treaties that may provide for different rules.

Information Reporting and Backup Withholding

Subject to the discussion below on foreign accounts, a non-U.S. holder will not be subject to backup withholding with respect to distributions on our common stock or Warrants we make to the non-U.S. holder (including constructive dividends with respect to the Warrants) provided the applicable withholding agent does not have actual knowledge or reason to know such holder is a United States person and the holder certifies its non-U.S. status, such as by providing a valid IRS Form W-8BEN, W-8BEN-E or W-8ECI, or other applicable certification. However, information returns generally will be filed with the IRS in connection with any distributions (including deemed distributions) made on our common stock and Warrants to the non-U.S. holder, regardless of whether any tax was actually withheld. Copies of these information returns may also be made available under the provisions of a specific treaty or agreement to the tax authorities of the country in which the non-U.S. holder resides or is established.

Information reporting and backup withholding may apply to the proceeds of a sale or other taxable disposition of Warrants or our common stock within the United States, and information reporting may (although backup withholding generally will not) apply to the proceeds of a sale or other taxable disposition of Warrants or our common stock outside the United States conducted through certain U.S.- related financial intermediaries, in each case, unless the beneficial owner certifies under penalty of perjury that it is a non-U.S. holder on IRS Form W-8BEN or W-8BEN-E, or other applicable form (and the payor does not have actual knowledge or reason to know that the beneficial owner is a U.S. person) or such owner otherwise establishes an exemption. Proceeds of a disposition of Warrants or our common stock conducted through a non-U.S. office of a non-U.S. broker generally will not be subject to backup withholding or information reporting.

Backup withholding is not an additional tax. Any amounts withheld under the backup withholding rules may be allowed as a refund or a credit against a non-U.S. holder's U.S. federal income tax liability, provided the required information is timely furnished to the IRS.

Additional Withholding Tax on Payments Made to Foreign Accounts

Withholding taxes may be imposed under the Foreign Account Tax Compliance Act, or FATCA, on certain types of payments made to non-U.S. financial institutions and certain other non-U.S. entities. Specifically, a 30% withholding tax may be imposed on dividends (including deemed dividends) with respect to, or (subject to the proposed Treasury Regulations discussed below) gross proceeds from the sale or other disposition of, Warrants or our common stock paid to, a "foreign financial institution" or a "non-financial foreign entity" (each as defined in the Code), unless (1) the foreign financial institution undertakes certain diligence and reporting obligations, (2) the non-financial foreign entity either certifies it does not have any "substantial United States owners" (as defined in the Code) or furnishes identifying information regarding each substantial United States owner, or (3) the foreign financial institution or non-financial foreign entity otherwise qualifies for an exemption from these rules. If the payee is a foreign financial institution and is subject to the diligence and reporting requirements in (1) above, it must enter into an agreement with the U.S. Department of the Treasury requiring, among other things, that it undertake to identify accounts held by certain "specified United States persons" or "United States-owned foreign entities" (each as defined in the Code), annually report certain information about such accounts, and withhold 30% on certain payments to non-compliant foreign financial institutions and certain other account holders. Foreign financial institutions located in jurisdictions that have an intergovernmental agreement with the United States governing FATCA may be subject to different rules.

Under the applicable Treasury Regulations and administrative guidance, withholding under FATCA generally applies to payments of dividends (including deemed dividends). While withholding under FATCA would have applied also to payments of gross proceeds from the sale or other disposition of our common stock or Warrants on or after January 1, 2019, recently proposed Treasury Regulations eliminate FATCA withholding on payments of gross proceeds entirely. Taxpayers generally may rely on these proposed Treasury Regulations until final Treasury Regulations are issued. Because we may not know the extent to which a distribution is a dividend for U.S. federal income tax purposes at the time it is made, for purposes of these withholding rules we or the applicable withholding agent may treat the entire distribution as a dividend. Prospective investors should consult their tax advisors regarding the potential application of these withholding provisions.

EXPERTS

The consolidated financial statements and schedule as of and for the years ended December 31, 2018 and 2017, incorporated by reference in this prospectus and in the registration statement have been so incorporated in reliance on the report of BDO USA, LLP, an independent registered public accounting firm (the report on the consolidated financial statements contains explanatory paragraphs regarding the Company's ability to continue as a going concern and revision due to discontinued operations and reverse stock split), incorporated herein by reference, given on the authority of said firm as experts in auditing and accounting.

LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for us by Latham & Watkins LLP, San Diego, California. The underwriters are being represented by Ellenoff Grossman & Schole LLP, New York, New York.

WHERE YOU CAN FIND MORE INFORMATION

We have filed a registration statement on Form S-1 with the SEC under the Securities Act of 1933, as amended. This prospectus is part of the registration statement but the registration statement includes additional information and exhibits. We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC maintains a web site that contains reports, proxy and information statements and other information regarding companies, such as ours, that file documents electronically with the SEC. The website address is www.sec.gov. The information on the SEC's website is not part of this prospectus, and any references to this website or any other website are inactive textual references only.

INCORPORATION BY REFERENCE

The SEC permits us to "incorporate by reference" the information contained in documents we have filed with the SEC, which means that we can disclose important information to you by referring you to those documents rather than by including them in this prospectus. Information that is incorporated by reference is considered to be part of this prospectus and you should read it with the same care that you read this prospectus. We have filed with the SEC, and incorporate by reference in this prospectus:

- our Annual Report on [Form 10-K](#) for the year ended December 31, 2018, filed on March 29, 2019, with the exception of PART II, Items 6, 7, and 8, and PART IV, Item 15(a)(2), as these Items were superseded by our Current Report on [Form 8-K](#) filed on September 10, 2019;
- our Quarterly Report on [Form 10-Q](#) for the quarter ended March 31, 2019, filed on May 14, 2019, with the exception of PART I, Items 1 and 2, as these Items were superseded by our Current Report on [Form 8-K](#) filed on September 10, 2019;
- our Quarterly Report on [Form 10-Q](#) for the quarter ended June 30, 2019, filed on August 15, 2019;
- our Definitive Proxy Statement on [Schedule 14A](#) (other than information furnished rather than filed), filed on April 19, 2019;
- our Current Reports on Form 8-K filed on [January 2, 2019](#), [February 1, 2019](#), [February 14, 2019](#), [February 27, 2019](#), [March 5, 2019](#), [March 18, 2019](#), [April 1, 2019 \(with respect to Item 1.01\)](#), [April 23, 2019](#), [April 30, 2019](#), [May 30, 2019](#), [June 14, 2019](#), [June 19, 2019](#), [June 27, 2019](#), [July 1, 2019](#), [July 5, 2019](#), [July 11, 2019](#), [July 16, 2019](#), [July 23, 2019](#), [July 29, 2019](#), [August 6, 2019](#), [August 9, 2019](#), [August 21, 2019](#) and [September 10, 2019](#); and
- the description of our common stock contained in our registration statement on [Form 10/A](#) filed with the SEC on July 16, 2001 (File No. 000-32501) and any amendment or report filed with the SEC for the purpose of updating the description.

Any statement contained in any document incorporated by reference herein 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 additional prospectus supplements modifies or supersedes such statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

All reports and other documents we subsequently file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the termination of this Offering, including all such documents we may file with the SEC after the date of the initial registration statement and prior to the effectiveness of the registration statement, but excluding any information furnished to, rather than filed with, the SEC, will also be incorporated by reference into this prospectus and deemed to be part of this prospectus from the date of the filing of such reports and documents.

We will provide without charge to each person, including any beneficial owner, to whom this prospectus is delivered, upon written or oral request, a copy of any or all documents that are incorporated by reference into this prospectus, but not delivered with the prospectus, other than exhibits to such documents unless such exhibits are specifically incorporated by reference into the documents that this prospectus incorporates. You should direct written requests to: Plus Therapeutics, Inc., 4200 Marathon Blvd., Suite 200, Austin, TX 78756, Attn: Investor Relations, or you may call us at (737) 255-7194.

PROSPECTUS

**Class A Units consisting of common stock and Series U Warrants and
Class B Units consisting of pre-funded Series V Warrants and Series U Warrants**

Sole Book-Running Manager

H.C. Wainwright & Co.

, 2019

PART II

Information Not Required In Prospectus

Item 13. Other Expenses of Issuance and Distribution.

The following is a statement of estimated expenses in connection with the issuance and distribution of the securities being registered, excluding underwriting fees. All expenses incurred with respect to the registration of the common stock will be borne by us. All amounts are estimates except the SEC registration fee and the FINRA filing fee.

	Amount to be Paid
SEC Registration Fee	\$ 4,234
FINRA Filing Fee	5,740
Printing Expenses	*
Legal Fees and Expenses	*
Accounting Fees and Expenses	*
Miscellaneous Expenses	*
Total	<u>\$ *</u>

* To be provided by amendment.

Item 14. Indemnification of Directors and Officers.

Section 145 of the DGCL authorizes a court to award or a corporation's board of directors to grant indemnification to directors and officers in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities (including reimbursement for expenses incurred) arising under the Securities Act of 1933, as amended, or the Securities Act.

Our amended and restated certificate of incorporation, as amended (our "Certificate"), includes a provision that, to the fullest extent permitted by the Delaware General Corporation Law, eliminates the personal liability of our directors for monetary damages for breach of fiduciary duty as a director. In addition, together our Certificate and our amended and restated bylaws, as amended (our "Bylaws"), require us to indemnify, to the fullest extent permitted by law, any person made or threatened to be made a party to an action or proceeding (whether criminal, civil, administrative or investigative) by reason of the fact that such person is or was a director, officer or employee of Plus Therapeutics or any predecessor of ours, or serves or served at any other enterprise as a director, officer or employee at our request or the request of any predecessor of ours, against expenses (including attorneys' fees), judgments, fines, settlements and other amounts actually and reasonably incurred in connection with any proceeding, arising by reason of the fact that such person is or was an agent of ours. Our Bylaws also provide that we may, to the fullest extent provided by law, indemnify any person against expenses (including attorneys' fees), judgments, fines, settlements and other amounts actually and reasonably incurred in connection with any proceeding, arising by reason of the fact that such person is or was an agent of ours. We are required to advance expenses incurred by our directors, officers, employees and agents in defending any action or proceeding for which indemnification is required or permitted, subject to certain limited exceptions. The indemnification rights conferred by our Bylaws are not exclusive.

Item 15. Recent Sales of Unregistered Securities.

The following is a summary of all securities that we have sold within the past three years without registration under the Securities Act of 1933, as amended (the "Securities Act").

- On December 22, 2016, we issued 255 shares of common stock to Lincoln Park Capital Fund, LLC, or Lincoln Park, as an initial fee for its commitment to purchase shares of our common stock pursuant to the Purchase Agreement dated December 22, 2016 between us and Lincoln Park, and from April 2017 through October 2017, we issued 3,789 shares of common stock to Lincoln Park at a weighted average price per share of \$459.18 for aggregate gross consideration of \$1.7 million pursuant to such Purchase Agreement. The shares were issued in reliance on an exemption from registration under Section 4(a)(2) of the Securities Act.
- On February 15, 2017, pursuant to the terms and conditions of an Asset Purchase Agreement with Azaya Therapeutics, Inc., or Azaya, we issued 2,347 shares of common stock to Azaya, 587 of which were deposited into a 15-month escrow. The shares were issued in reliance on an exemption from registration under Section 4(a)(2) of the Securities Act.
- On April 17, 2017 and May 31, 2017, pursuant to the terms and conditions of an Underwriting Agreement with Maxim Group LLC, or Maxim, we issued warrants to purchase 172 shares and 1,698 shares, respectively, of common stock to Maxim. The shares were issued in reliance on an exemption from registration under Section 4(a)(2) of the Securities Act.
- From January 2018 through the date hereof, we issued 44,972 shares of common stock to Lincoln Park at a weighted average price per share of \$12.25 for aggregate gross consideration of \$0.6 million pursuant to the Purchase Agreement dated September 21, 2018 between us and Lincoln Park. The shares were issued in reliance on an exemption from registration under Section 4(a)(2) of the Securities Act.
- On August 1, 2019, pursuant to the terms and conditions of a stock purchase agreement with an accredited investor, we issued 20 shares of common stock to such investor. The shares were issued in reliance on an exemption from registration under Section 4(a)(2) of the Securities Act.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits

The exhibits to the registration statement are listed in the Exhibit Index to this registration statement and are incorporated herein by reference.

(b) Financial statement schedules

All schedules have been omitted because either they are not required, are not applicable or the information is otherwise set forth in the financial statements and related notes thereto.

Item 17. Undertakings.

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 Securities and Exchange Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent 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.; *provided, however*, that paragraphs (1)(i), (1)(ii) and (1)(iii) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Securities and Exchange Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of 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.

(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:

(A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(B) 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.

(5) That for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(6) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement 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.

(7) The undersigned registrant hereby undertakes to supplement the prospectus, after the expiration of the subscription period, to set forth the results of the subscription offer, the transactions by the underwriters during the subscription period, the amount of unsubscribed securities to be purchased by the underwriters, and the terms of any subsequent reoffering thereof. If any public offering by the underwriters is to be made on terms differing from those set forth on the cover page of the prospectus, a post-effective amendment will be filed to set forth the terms of such offering.

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

(9) The undersigned registrant hereby undertakes that:

(i) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective; and

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

**EXHIBIT INDEX
PLUS THERAPEUTICS, INC.**

Exhibit Number	Exhibit Title	Filed Herewith	Incorporated by Reference		
			Form	File No.	Date Filed
1.1*	Underwriting Agreement, dated , 2019, between Plus Therapeutics, Inc. and H.C. Wainwright & Co., LLC.				
2.1	Asset and Equity Purchase Agreement, dated as of March 29, 2019, by and among Cytori Therapeutics, Inc., Cytori Therapeutics, K.K., and Lorem Vascular Pte. Ltd.		8-K	001-34375 Exhibit 2.1	04/01/2019
2.2	Asset and Share Sale and Purchase Agreement, dated as of April 19, 2019, by and between Cytori Therapeutics, Inc. and Seijirō Shirahama.		8-K	001-34375 Exhibit 2.1	04/23/2019
3.1	Composite Certificate of Incorporation.		10-K	001-34375 Exhibit 3.1	03/11/2016
3.2	Certificate of Amendment to Amended and Restated Certificate of Incorporation, as amended.		8-K	001-34375 Exhibit 3.1	05/10/2016
3.3	Certificate of Amendment to Amended and Restated Certificate of Incorporation, as amended.		8-K	001-34375 Exhibit 3.1	05/23/2018
3.4	Certificate of Amendment to Amended and Restated Certificate of Incorporation, as amended.		8-K	001-34375 Exhibit 3.1	07/29/2019
3.5	Certificate of Amendment to Amended and Restated Certificate of Incorporation, as amended.		8-K	001-34375 Exhibit 3.1	08/06/2019
3.6	Amended and Restated Bylaws of Plus Therapeutics, Inc.		8-K	001-34375 Exhibit 3.2	07/29/2019
3.7	Amendment to Amended and Restated Bylaws of Plus Therapeutics, Inc.		8-K	001-34375 Exhibit 3.1	05/06/2014
3.8	Certificate of Designation of Preferences, Rights and Limitations of Series A 3.6% Convertible Preferred Stock.		8-K	001-34375 Exhibit 3.1	10/08/2014
3.9	Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock.		8-K	001-34375 Exhibit 3.1	11/28/2017
3.10	Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock		8-K	001-34375 Exhibit 3.1	07/25/2018
4.1	Warrant to Purchase Common Stock issued by Cytori Therapeutics, Inc. on October 14, 2008 in favor of Silicon Valley Bank, pursuant to the Loan and Security Agreement dated October 14, 2008.		10-K	000-32501 Exhibit 10.62	03/06/2009

4.2	Warrant to Purchase Common Stock issued by Cytori Therapeutics, Inc. on June 11, 2010 in favor of GE Capital Equity Investments, Inc., pursuant to the Amended and Restated Loan and Security Agreement dated June 11, 2010.		8-K	001-34375 Exhibit 10.73	06/17/2010
4.3	Warrant to Purchase Common Stock issued by Cytori Therapeutics, Inc. on June 11, 2010 in favor of Silicon Valley Bank, pursuant to the Amended and Restated Loan and Security Agreement dated June 11, 2010.		8-K	001-34375 Exhibit 10.74	06/17/2010
4.4	Warrant to Purchase Common Stock issued by Cytori Therapeutics, Inc. on June 11, 2010 in favor of Oxford Financial Corporation, pursuant to the Amended and Restated Loan and Security Agreement dated June 11, 2010.		8-K	001-34375 Exhibit 10.75	06/17/2010
4.5	Warrant to Purchase Common Stock issued by Cytori Therapeutics, Inc. on September 9, 2011 in favor of GE Capital Equity Investments, Inc., pursuant to the Amended and Restated Loan and Security Agreement dated September 9, 2011.		8-K	001-34375 Exhibit 10.84	09/15/2011
4.6	Warrant to Purchase Common Stock issued by Cytori Therapeutics, Inc. on September 9, 2011 in favor of Silicon Valley Bank, pursuant to the Amended and Restated Loan and Security Agreement dated September 9, 2011.		8-K	001-34375 Exhibit 10.85	09/15/2011
4.7	Warrant to Purchase Common Stock issued by Cytori Therapeutics, Inc. on September 9, 2011 in favor of Oxford Financial Corporation, pursuant to the Amended and Restated Loan and Security Agreement dated September 9, 2011.		8-K	001-34375 Exhibit 10.86	09/15/2011
4.8	Warrant to Purchase Common Stock issued by Cytori Therapeutics, Inc. on September 9, 2011 in favor of Oxford Financial Corporation, pursuant to the Amended and Restated Loan and Security Agreement dated September 9, 2011.		8-K	001-34375 Exhibit 10.87	09/15/2011
4.9	Warrant to Purchase Common Stock issued by Cytori Therapeutics, Inc. on June 28, 2013 in favor of Oxford Finance LLC pursuant to the Loan and Security Agreement dated June 28, 2013.		10-Q	001-34375 Exhibit 4.17	08/09/2013
4.10	Warrant to Purchase Common Stock issued by Cytori Therapeutics, Inc. on June 28, 2013 in favor of Oxford Finance LLC pursuant to the Loan and Security Agreement dated June 28, 2013.		10-Q	001-34375 Exhibit 4.18	08/09/2013
4.11	Warrant to Purchase Common Stock issued by Cytori Therapeutics, Inc. on June 28, 2013 in favor of Oxford Finance LLC pursuant to the Loan and Security Agreement dated June 28, 2013.		10-Q	001-34375 Exhibit 4.19	08/09/2013

4.12	Warrant to Purchase Common Stock issued by Cytori Therapeutics, Inc. on June 28, 2013 in favor of Oxford Finance LLC pursuant to the Loan and Security Agreement dated June 28, 2013.		10-Q	001-34375 Exhibit 4.20	08/09/2013
4.13	Warrant to Purchase Common Stock issued by Cytori Therapeutics, Inc. on June 28, 2013 in favor of Silicon Valley Bank pursuant to the Loan and Security Agreement dated June 28, 2013.		10-Q	001-34375 Exhibit 4.21	08/09/2013
4.14	Form of Warrant to Purchase Common Stock for Investors in the Units issued in May 2014.		8-K	001-34375 Exhibit 4.1	05/30/2014
4.15	Form of Warrant to Purchase Common Stock for Placement Agent of the Units issued in May 2014.		8-K	001-34375 Exhibit 4.2	05/30/2014
4.16	Form of Amendment to Warrant to Purchase Common Stock.		8-K	001-34375 Exhibit 4.1	09/08/2014
4.17	Form of Warrant to Purchase Common Stock.		8-K	001-34375 Exhibit 4.2	09/08/2014
4.18	Form of Warrant for Purchasers of the Units issued in October 2014.		8-K	001-34375 Exhibit 4.1	10/08/2014
4.19	Form of Initial Warrant to Purchase Common Stock.		8-K	001-34375 Exhibit 4.1	05/05/2015
4.20	Form of Additional Warrant to Purchase Common Stock.		8-K	001-34375 Exhibit 4.2	05/05/2015
4.21	Form of Pre-Funded Warrant to Purchase Common Stock.		8-K	001-34375 Exhibit 4.3	05/05/2015
4.22	Amendment to Common Stock Purchase Warrant.		10-K	001-34375 Exhibit 4.23	03/11/2016
4.23	Amendment to Series A-1 Warrant to Purchase Common Stock.		10-K	001-34375 Exhibit 4.24	03/11/2016
4.24	Amendment to Series A-2 Warrant to Purchase Common Stock.		10-K	001-34375 Exhibit 4.25	03/11/2016
4.25	Form of Non-Transferable Subscription Rights Certificate issued in 2016.		S-1/A	333-210628 Exhibit 4.26	05/11/2016
4.26	Form of Series R Warrant.		S-1/A	333-210628 Exhibit 4.27	05/11/2016
4.27	Form of Series S Warrant.		S-1/A	333-219967 Exhibit 4.27	10/03/2017
4.28	Form of Series T Warrant.		POS AM	333-224502 Exhibit 4.28	07/09/2018

4.29	Form of Series R Warrant Agent Agreement between Cytori Therapeutics, Inc. and Broadridge Corporate Issuer Solutions, Inc.		S-1/A	333-210628 Exhibit 4.28	05/11/2016
4.30	Form of Warrant by and between Cytori Therapeutics, Inc. and Maxim Group LLC.		8-K	001-34375 Exhibit 4.1	04/12/2017
4.31	Form of Restated Warrant by and between Cytori Therapeutics, Inc. and Broadridge Corporate Issuer Solutions, Inc.		10-Q	001-34375 Exhibit 4.2	08/11/2017
4.32	Form of Non-Transferable Subscription Rights Certificate.		S-1/A	333-219967 Exhibit 4.31	10/03/2017
4.33	Form of Series S Warrant Agent Agreement between Cytori Therapeutics, Inc. and Broadridge Corporate Issuer Solutions, Inc.		S-1/A	333-219967 Exhibit 4.32	10/03/2017
4.34	Form of Common Stock Certificate.		10-K	001-34375 Exhibit 4.33	03/09/2018
4.35	Form of Non-Transferable Subscription Rights Certificate.		POS AM	333-224502 Exhibit 4.35	07/09/2018
4.36	Form of Series T Warrant Agent Agreement between Cytori Therapeutics, Inc. and Broadridge Corporate Issuer Solutions, Inc.		POS AM	333-224502 Exhibit 4.36	07/09/2018
4.37*	Form of Series U Warrant.				
4.38*	Form of Series V Warrant.				
5.1*	Opinion of Latham & Watkins LLP.				
10.1#	Amended and Restated 1997 Stock Option and Stock Purchase Plan.		10-12G	000-32501 Exhibit 10.1	03/30/2001
10.2#	2004 Equity Incentive Plan of Cytori Therapeutics, Inc.		8-K	000-32501 Exhibit 10.1	08/27/2004
10.3#	Form of Options Exercise and Stock Purchase Agreement Relating to the 2004 Equity Incentive Plan.		10-Q	000-32501 Exhibit 10.23	11/15/2004
10.4#	Form of Notice of Stock Options Grant Relating to the 2004 Equity Incentive Plan.		10-Q	000-32501 Exhibit 10.24	11/15/2004
10.5+	License & Royalty Agreement, effective August 23, 2007, by and between Olympus-Cytori, Inc. and Cytori Therapeutics, Inc.		10-Q	000-32501 Exhibit 10.49	11/13/2007

10.6	Common Stock Purchase Agreement, dated February 8, 2008, by and between Green Hospital Supply, Inc. and Cytori Therapeutics, Inc.		8-K	000-32501 Exhibit 10.51	02/19/2008
10.7	Amendment No. 1, dated February 29, 2008, to Common Stock Purchase Agreement, dated February 8, 2008, by and between Green Hospital Supply, Inc. and Cytori Therapeutics, Inc.		8-K	000-32501 Exhibit 10.51.1	2/29/2008
10.8	Lease Agreement entered into on April 2, 2010, between HCP Callan Rd, LLC. and Cytori Therapeutics, Inc.		10-Q	001-34375 Exhibit 10.69	05/06/2010
10.9	Common Stock Purchase Agreement, dated December 6, 2010, by and among Cytori Therapeutics, Inc. and Astellas Pharma Inc.		8-K	001-34375 Exhibit 10.76	12/09/2010
10.10#	Form of Notice and Restricted Stock Award Agreement for grants of performance-based restricted stock awards under the 2004 Equity Incentive Plan.		8-K	001-34375 Exhibit 10.1	03/04/2011
10.11	First Amendment to Lease Agreement entered into on November 4, 2011, between HCP Callan Rd, LLC. and Cytori Therapeutics, Inc.		10-Q	001-34375 Exhibit 10.88	11/08/2011
10.12#	2011 Employee Stock Purchase Plan.		DEF 14A	001-34375 Appendix A	05/02/2011
10.13	Contract HHSO100201200008C dated September 27, 2012, by and between Cytori Therapeutics, Inc. and the U.S. Department of Health and Human Services Biomedical Advanced Research and Development Authority.		S-1/A	333-219967 Exhibit 10.14	10/03/2017
10.14	Joint Venture Termination Agreement dated May 8, 2013 by and between Cytori Therapeutics, Inc. and Olympus Corporation.		10-Q	001-34375 Exhibit 10.91	05/10/2013
10.15+	Puregraft Sale-License-Supply Agreement, dated July 30, 2013, by and between Cytori Therapeutics, Inc. and Bimini Technologies LLC.		10-Q/A	001-34375 Exhibit 10.93	02/12/2014
10.16+	Amended and Restated License and Supply Agreement dated January 30, 2014, by and between Cytori Therapeutics, Inc. and Lorem Vascular Pty. Ltd.		8-K	001-34375 Exhibit 10.94	02/04/2014
10.17	Sales Agreement, dated May 12, 2014, by and between Cytori Therapeutics, Inc. and Cowen and Company, LLC.		8-K	001-34375 Exhibit 10.1	05/12/2014
10.18	Contract HHSO100201200008C Amendment No. 1 dated August 18, 2014, by and between Cytori Therapeutics, Inc. and the U.S. Department of Health and Human Services Biomedical Advanced Research and Development Authority.		8-K	001-34375 Exhibit 10.99	08/19/2014

10.19	Form of Securities Purchase Agreement by and between Cytori Therapeutics, Inc. and the Purchasers (as defined therein), dated as of October 8, 2014.		8-K	001-34375 Exhibit 10.1	10/08/2014
10.20	Amendment of Solicitation/Amendment of Contract, effective December 17, 2014, by and between ASPR-BARDA and Cytori Therapeutics, Inc.		10-K	001-34375 Exhibit 10.21	03/24/2017
10.21	Amendment of Solicitation/Modification of Contract, effective January 5, 2015, by and between ASPR-BARDA and Cytori Therapeutics, Inc.		10-K	001-34375 Exhibit 10.22	03/24/2017
10.22	Amendment One to the Securities Purchase Agreement, dated March 16, 2015, between Cytori Therapeutics, Inc. and certain institutional investors.		10-Q	001-34375 Exhibit 10.1	05/11/2015
10.23	Form of Securities Purchase Agreement, dated May 5, 2015, by and among Cytori Therapeutics, Inc. and the investors named therein.		8-K	001-34375 Exhibit 10.1	05/05/2015
10.24	Placement Agency Agreement, dated May 5, 2015, by and between Cytori Therapeutics, Inc. and Mizuho Securities USA Inc.		8-K	001-34375 Exhibit 10.2	05/05/2015
10.25	Amendment One to Joint Venture Termination Agreement, dated April 30, 2015, by and between Cytori Therapeutics, Inc. and Olympus Corporation.		8-K	001-34375 Exhibit 10.1	05/05/2015
10.26	Loan and Security Agreement, dated May 29, 2015, by and between Cytori Therapeutics, Inc. and Oxford Finance, LLC.		10-Q	001-34375 Exhibit 10.4	08/10/2015
10.27	First Amendment to Loan and Security Agreement, dated September 20, 2017, by and between Cytori Therapeutics, Inc. and Oxford Finance, LLC.		S-1/A	333-219967 Exhibit 10.45	10/03/2017
10.28	Amendment One to the Securities Purchase Agreement between Cytori Therapeutics, Inc. and certain institutional investors dated May 5, 2015.		10-K	001-34375 Exhibit 10.111	03/11/2016
10.29#	2015 New Employee Incentive Plan.		8-K	001-34375 Exhibit 10.1	01/05/2016
10.30#	Form of Agreement for Acceleration and/or Severance.		10-K	001-34375 Exhibit 10.113	03/11/2016
10.31#	Form of Stock Option Agreement under the New Employee Incentive Plan.		S-8	333-210211 Exhibit 99.4	03/15/2016
10.32#	Form of Notice of Grant of Stock Option under the 2015 New Employee Incentive Plan.		S-8	333-210211 Exhibit 99.5	03/15/2016
10.33#	2014 Equity Incentive Plan of Cytori Therapeutics, Inc., as amended and restated.		10-Q	001-34375 Exhibit 10.3	08/15/2019

10.34	Amendment Two to Joint Venture Termination Agreement, dated January 8, 2016.		10-Q	001-34375 Exhibit 10.4	05/10/2016
10.35	Amendment of Solicitation/Amendment of Contract, effective April 1, 2016, by and between ASPR-BARDA and Cytori Therapeutics, Inc.		10-Q	001-34375 Exhibit 10.1	08/05/2016
10.36	Amendment of Solicitation/Amendment of Contract, effective September 9, 2016, by and between ASPR-BARDA and Cytori Therapeutics, Inc.		10-Q	001-34375 Exhibit 10.1	11/09/2016
10.37	Purchase Agreement between Cytori Therapeutics, Inc. and Lincoln Park Capital Fund, LLC, dated December 22, 2016.		8-K	001-34375 Exhibit 10.1	12/29/2016
10.38	Registration Rights Agreement between Cytori Therapeutics, Inc. and Lincoln Park Capital Fund, LLC, dated December 22, 2016.		8-K	001-34375 Exhibit 10.2	12/29/2016
10.39+	Asset Purchase Agreement by and between Cytori Therapeutics, Inc. and Azaya Therapeutics, Inc., effective January 16, 2017.		10-K	001-34375 Exhibit 10.40	03/24/2017
10.40	Lease Agreement, dated February 27, 2017, by and between 6262 Lusk Investors LLC and Cytori Therapeutics, Inc.		10-K	001-34375 Exhibit 10.41	03/24/2017
10.41	First Amendment to Lease Agreement, dated July 27, 2017, by and between 6262 Lusk Investors LLC and Cytori Therapeutics, Inc.		10-K	001-34375 Exhibit 10.43	03/09/2018
10.42	Second Amendment to Lease Agreement, dated September 7, 2017, by and between 6262 Lusk Investors LLC and Cytori Therapeutics, Inc.		10-K	001-34375 Exhibit 10.44	03/09/2018
10.43	Termination of Lease Agreement, dated February 21, 2018, by and between 6262 Lusk Investors LLC and Cytori Therapeutics, Inc.		8-K	001-34375 Exhibit 10.1	02/23/2018
10.44#	First Amendment to the Cytori Therapeutics, Inc. 2015 New Employee Incentive Plan, dated Jan. 26, 2017.		10-K	001-34375 Exhibit 10.42	03/24/2017
10.45	Sixth Amendment of Solicitation/Modification of Contract, effective April 14, 2017, by and between ASPR-BARDA and Cytori Therapeutics, Inc.		10-Q	001-34375 Exhibit 10.1	05/12/2017
10.46+	Seventh Amendment of Solicitation/Modification of Contract, effective May 19, 2017, by and between ASPR-BARDA and Cytori Therapeutics, Inc.		10-Q	001-34375 Exhibit 10.3	08/11/2017
10.47+	Eighth Amendment of Solicitation/Modification of Contract, effective May 23, 2017, by and between ASPR-BARDA and Cytori Therapeutics, Inc.		10-Q	001-34375 Exhibit 10.4	08/11/2017

10.48	Sales Agreement, dated June 1, 2018, by and between Cytori Therapeutics, Inc. and B. Riley FBR, Inc.		8-K	001-34375 Exhibit 10.1	06/01/2018
10.49	Second Amendment to Loan and Security Agreement, dated June 19, 2018, by and between Cytori Therapeutics, Inc. and Oxford Finance, LLC.		10-Q	001-34375 Exhibit 10.3	08/14/2018
10.50	Third Amendment to Loan and Security Agreement, dated August 31, 2018, by and between Cytori Therapeutics, Inc. and Oxford Finance, LLC.		S-1	333-227485 Exhibit 10.51	09/21/2018
10.51	Fourth Amendment to Loan and Security Agreement dated December 31, 2018, by and between Cytori Therapeutics, Inc. and Oxford Finance, LLC.		S-1	333-229485 Exhibit 10.52	02/01/2019
10.52	Purchase Agreement between Cytori Therapeutics, Inc. and Lincoln Park Capital Fund, LLC, dated September 21, 2018.		8-K	001-34375 Exhibit 10.1	09/21/2018
10.53	Registration Rights Agreement between Cytori Therapeutics, Inc. and Lincoln Park Capital Fund, LLC, dated September 21, 2018.		8-K	001-34375 Exhibit 10.2	09/21/2018
10.54	Fifth Amendment to Loan and Security Agreement, effective as of January 31, 2019, by and between Cytori Therapeutics, Inc. and Oxford Finance, LLC.		10-K	001-34375 Exhibit 10.55	03/29/2019
10.55	Sixth Amendment to Loan and Security Agreement, effective as of February 28, 2019, by and between Cytori Therapeutics, Inc. and Oxford Finance, LLC.		10-K	001-34375 Exhibit 10.56	03/29/2019
10.56	Seventh Amendment to Loan and Security Agreement, effective as of April 24, 2019, by and between Cytori Therapeutics, Inc. and Oxford Finance, LLC.		10-Q	001-34375 Exhibit 10.1	08/15/2019
10.57	Eighth Amendment to Loan and Security Agreement, effective as of July 15, 2019, by and between Plus Therapeutics, Inc. and Oxford Finance, LLC.		10-Q	001-34375 Exhibit 10.2	08/15/2019
23.1	Consent of BDO USA, LLP, Independent Registered Public Accounting Firm.	X			
23.2*	Consent of Latham & Watkins LLP (included in Exhibit 5.1).				
24.1	Power of Attorney.		S-1	333-229485 Exhibit 24.1	02/01/2019

* To be filed by amendment.

Indicates management contract or compensatory plan or arrangement.

+ Confidential treatment has been granted with respect to certain portions of this exhibit. Omitted portions have been filed separately with the Securities and Exchange Commission.

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 Austin, State of Texas, on September 10, 2019.

PLUS THERAPEUTICS, INC.

By: /s/ Marc H. Hedrick, M.D.
Marc H. Hedrick, M.D.
President and Chief Executive Officer

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

SIGNATURE	TITLE	DATE
<u>*</u> Richard J. Hawkins	Chairman of the Board	September 10, 2019
<u>/s/ Marc H. Hedrick, M.D.</u> Marc H. Hedrick, M.D.	President & Chief Executive Officer (Principal Executive, Financial and Accounting Officer)	September 10, 2019
<u>*</u> Gregg A. Lapointe	Director	September 10, 2019
<u>*</u> Ronald A. Martell	Director	September 10, 2019
<u>*By: Marc H. Hedrick, M.D.</u> Marc H. Hedrick, M.D., Attorney-in-Fact		

Consent of Independent Registered Public Accounting Firm

Plus Therapeutics, Inc.
Austin, Texas

We hereby consent to the incorporation by reference in the Prospectus constituting a part of this Registration Statement of our report dated March 29, 2019, except as to the effects of reverse stock split and discontinued operations discussed in Notes 1 and 3 which are as of September 10, 2019, relating to the consolidated financial statements and schedule of Plus Therapeutics, Inc. (formerly Cytori Therapeutics, Inc.) (“Company”) as of and for the years ended December 31, 2018 and 2017, appearing in the Company’s Current Report on Form 8-K filed on September 10, 2019. Our report contains explanatory paragraphs regarding the Company’s ability to continue as a going concern and revision due to discontinued operations and reverse stock split.

We also consent to the reference to us under the caption “Experts” in the Prospectus.

/s/ BDO USA, LLP
San Diego, California

September 10, 2019