

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

**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)

2834  
(Primary Standard Industrial  
Classification Code Number)

33-0827593  
(I.R.S. Employer  
Identification Number)

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)

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**Approximate date of commencement of proposed sale to the public:** From time to time after this registration statement becomes effective, as determined by the selling stockholder.

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, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer  Accelerated filer   
Non-accelerated filer  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	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share(2)	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Common Stock, par value \$0.001 per share	1,519,000	\$2.41	\$3,660,790	\$400

- Represents 180,701 shares of common stock previously issued to the selling stockholder named herein and 1,338,299 shares of common stock that are issuable pursuant to a purchase agreement with the selling stockholder named herein. Pursuant to Rule 416(a) under the Securities Act of 1933, the registrant is also registering hereunder an indeterminate number of shares that may be issued and resold resulting from stock splits, stock dividends or similar transactions.
- Estimated pursuant to Rule 457(c) solely for the purpose of calculating the registration fee, based upon the average of the high and low prices for the registrant's common stock as reported on the Nasdaq Capital Market on October 27, 2020.

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

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

**PRELIMINARY PROSPECTUS**

**(Subject to Completion, Dated October 29, 2020)**

**1,519,000 Shares of Common Stock**



This prospectus relates to the offer and sale of up to 1,519,000 shares of our common stock, par value \$0.001 per share, by Lincoln Park Capital Fund, LLC, which we refer to in this prospectus as Lincoln Park or the selling stockholder.

The shares of common stock to which this prospectus relates have been or may be issued by us to Lincoln Park pursuant to a purchase agreement, dated as of September 30, 2020, we entered into with Lincoln Park, which we refer to in the prospectus as the Purchase Agreement. We are not selling any securities under this prospectus and will not receive any of the proceeds from the sale of our common stock by the selling stockholder. However, we may receive up to \$25.0 million aggregate gross proceeds under the Purchase Agreement from any sales of common stock we make to Lincoln Park pursuant to the Purchase Agreement after the date of this prospectus. On October 2, 2020, we issued 180,701 shares to Lincoln Park as consideration for its irrevocable commitment to purchase our common stock under the Purchase Agreement. See “The Lincoln Park Transaction” for a description of the Purchase Agreement and “Selling Stockholder” for additional information regarding Lincoln Park.

The selling stockholder may sell or otherwise dispose of the common stock described in this prospectus in a number of different ways and at varying prices. See “Plan of Distribution” for more information about how the selling stockholder may sell or otherwise dispose of the common stock being registered pursuant to this prospectus. The selling stockholder is an “underwriter” within the meaning of Section 2(a)(11) of the Securities Act of 1933, as amended, or the Securities Act.

We will pay the expenses incurred in registering under the Securities Act the offer and sale of the common stock to which this prospectus relates by the selling stockholder, including legal and accounting fees. See “Plan of Distribution”.

Our common stock is currently listed on the Nasdaq Capital Market, or Nasdaq, under the symbol “PSTV.” On October 27, 2020, the closing price of our common stock, as reported on Nasdaq, was \$2.36 per share.

**Investing in our securities involves a high degree of risk. These risks are described in the “[Risk Factors](#)” section on page 6 of this prospectus. You should also consider the risk factors described or referred to in any documents incorporated by reference in this prospectus, and in any applicable prospectus supplement, before investing in these securities.**

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

The date of this prospectus is \_\_\_\_\_, 2020

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## ABOUT THIS PROSPECTUS

This prospectus forms part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, and that 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 provided in this prospectus or in a prospectus supplement or any free writing prospectuses or amendments thereto. Neither we, nor the selling stockholder, have authorized anyone else to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. You should assume that the information in this prospectus is accurate only as of the date hereof. Our business, financial condition, results of operations and prospects may have changed since that date.

Neither we, nor the selling stockholder, are 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 must inform themselves about, and observe any restrictions relating to, the offering of the securities as to distribution of the prospectus outside of the United States.

Unless the context otherwise requires, references in this prospectus to “Plus,” “the Company,” “we,” “us” and “our” refer to Plus Therapeutics, Inc. Our logo and all product names are our common law trademarks. 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.

## 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 common stock, you should read this entire prospectus carefully, including the section entitled "Risk Factors," and any documents incorporated by reference.*

### **Our Business**

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 leverage 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.

We were initially formed as a California general partnership in July 1996 and incorporated in the State of Delaware in May 1997. We were formerly known as Cytori Therapeutics, Inc., before that as MacroPore Biosurgery, Inc. and before that as MacroPore, Inc. Our corporate offices are located at 4200 Marathon Blvd., Suite 200, Austin, Texas 78756. Our telephone number is (737) 255-7194. Our website address is [www.plustherapeutics.com](http://www.plustherapeutics.com). The information found on our website, or that may be accessed by links on our website, is not part of this prospectus. We have included our website address solely as an inactive textual reference. Investors should not rely on any such information in deciding whether to purchase our common stock.

### **The Purchase Agreement with Lincoln Park**

On September 30, 2020, we entered into the Purchase Agreement with Lincoln Park, pursuant to which Lincoln Park has agreed to purchase from us up to an aggregate of \$25.0 million of our common stock (subject to certain limitations) from time to time over the term of the Purchase Agreement. Also on September 30, 2020, we entered into a registration rights agreement with Lincoln Park, which we refer to in this prospectus as the Registration Rights Agreement, pursuant to which we filed with the Securities and Exchange Commission, or the SEC, the registration statement that includes this prospectus to register for resale under the Securities Act of 1933, as amended, or the Securities Act, the shares of our common stock that have been or may be issued to Lincoln Park under the Purchase Agreement.

This prospectus covers the resale by the selling stockholder of up to 1,519,000 shares of our common stock, comprised of: (i) 180,701 shares of our common stock that we have already issued to Lincoln Park as a fee for making its irrevocable commitment to purchase our common stock under the Purchase Agreement, which we refer to in this prospectus as the Commitment Shares, and (ii) up to an additional 1,338,299 shares of our common stock that we have reserved for sale to Lincoln Park under the Purchase Agreement from time to time

after the date of this prospectus, if and when we determine to sell additional shares of our common stock to Lincoln Park under the Purchase Agreement.

Other than the 180,701 Commitment Shares that we issued to Lincoln Park as a fee for making its irrevocable commitment to purchase our common stock under the Purchase Agreement, we do not have the right to commence any sales of our common stock to Lincoln Park under the Purchase Agreement until all of the conditions set forth in the Purchase Agreement have been satisfied, including that the SEC has declared effective the registration statement that includes this prospectus registering the shares of our common stock that have been and may be issued and sold to Lincoln Park under the Purchase Agreement, which we refer to in this prospectus as the commencement. From and after the commencement, we may, from time to time and at our sole discretion for a period of 36-months, on any business day that we select on which the closing sale price of our common stock equals or exceeds \$0.25 per share, direct Lincoln Park to purchase up to 50,000 shares of our common stock, which amount may be increased depending on the market price of our common stock at the time of sale, subject to a maximum commitment of \$500,000 per purchase, which we refer to in this prospectus as “Regular Purchases.” In addition, at our discretion, Lincoln Park has committed to purchase other “accelerated amounts” and/or “additional accelerated amounts” under certain circumstances. We will control the timing and amount of any sales of our common stock to Lincoln Park. The purchase price of the shares of our common stock that may be sold to Lincoln Park in Regular Purchases under the Purchase Agreement will be based on the market price of our common stock immediately preceding the time of sale as computed under the Purchase Agreement. The purchase price per share will be equitably adjusted as provided in the Purchase Agreement for any reorganization, recapitalization, non-cash dividend, stock split, or other similar transaction as set forth in the Purchase Agreement. We may at any time in our sole discretion terminate the Purchase Agreement without fee, penalty or cost upon one business day notice. There are no restrictions on future financings, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement or Registration Rights Agreement, other than a prohibition on our entering into certain types of transactions that are defined in the Purchase Agreement as “Variable Rate Transactions.” Lincoln Park may not assign or transfer its rights and obligations under the Purchase Agreement.

As of September 29, 2020, there were 4,591,415 shares of our common stock outstanding, of which 4,559,248 shares of our common stock were held by non-affiliates. Although the Purchase Agreement provides that we may sell up to an aggregate of \$25.0 million of our common stock to Lincoln Park, only 1,519,000 shares of our common stock are being registered for resale under this prospectus, which represents the 180,701 Commitment Shares that we issued to Lincoln Park as a fee for making its irrevocable commitment to purchase our common stock under the Purchase Agreement and an additional 1,338,299 shares of our common stock that we may issue and sell to Lincoln Park in the future under the Purchase Agreement, if and when we sell shares of our common stock to Lincoln Park under the Purchase Agreement. Depending on the market prices of our common stock at the time we elect to issue and sell shares of our common stock to Lincoln Park under the Purchase Agreement, we may need to register for resale under the Securities Act additional shares of our common stock in order to receive aggregate gross proceeds equal to the \$25.0 million total commitment available to us under the Purchase Agreement. If all of the 1,338,299 shares of our common stock that may be sold to Lincoln Park in the future under the Purchase Agreement that are being registered for resale hereunder were issued and outstanding as of the date of this prospectus (without taking into account the 19.99% stockholder approval limitation), such shares of our common stock, taken together with the 180,701 Commitment Shares that we issued to Lincoln Park as a fee for making its irrevocable commitment to purchase our common stock under the Purchase Agreement and outstanding as of the date of this prospectus, would represent approximately 33.1% of the total number of shares of our common stock outstanding and approximately 33.3% of the total number of outstanding shares of our common stock held by non-affiliates, in each case as of September 29, 2020. If we elect to issue and sell to Lincoln Park under the Purchase Agreement more than the additional 1,338,299 shares of our common stock being registered for resale by Lincoln Park under this prospectus, which we have the right, but not the obligation, to do, we must first register for resale under the Securities Act any such additional shares of our

common stock, which could cause additional substantial dilution to our stockholders. The number of shares of our common stock ultimately offered for resale by Lincoln Park is dependent upon the number of shares of our common stock we ultimately decide to sell to Lincoln Park under the Purchase Agreement.

Under applicable Nasdaq rules, in no event may we issue or sell to Lincoln Park under the Purchase Agreement shares of our common stock in excess of 917,823 shares (including the Commitment Shares), which represents 19.99% of the shares of our common stock outstanding (based on 4,591,415 shares outstanding) immediately prior to the execution of the Purchase Agreement, which limitation we refer to as the Exchange Cap, unless (i) we obtain stockholder approval to issue shares of our common stock in excess of the Exchange Cap or (ii) the average price of all applicable sales of our common stock to Lincoln Park under the Purchase Agreement equals or exceeds \$3.1872 per share (which represents the lower of (A) the official closing price of our common stock on Nasdaq on the trading day immediately preceding the date of the Purchase Agreement and (B) the average official closing price of our common stock on Nasdaq for the five consecutive trading days ending on the trading day immediately preceding the date of the Purchase Agreement, plus an incremental amount of \$0.6272 attributable to the value of the Commitment Shares), so that such issuances and sales would be exempt from the Exchange Cap limitation under applicable Nasdaq rules. In any event, the Purchase Agreement specifically provides that we may not issue or sell any shares of our common stock under the Purchase Agreement if such issuance or sale would breach any applicable rules or regulations of The Nasdaq Stock Market.

The Purchase Agreement prohibits us from directing Lincoln Park to purchase any shares of our common stock if those shares of our common stock, when aggregated with all other shares of our common stock then beneficially owned by Lincoln Park and its affiliates, would result in Lincoln Park having beneficial ownership, at any single point in time, of more than 4.99% of the then total outstanding shares of our common stock, as calculated pursuant to Section 13(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and Rule 13d-3 thereunder, which limitation we refer to as the Beneficial Ownership Cap.

Issuances of our common stock to Lincoln Park under the Purchase Agreement will not affect the rights or privileges of our existing stockholders, except that the economic and voting interests of each of our existing stockholders will be diluted as a result of any such issuance. Although the number of shares of our common stock that our existing stockholders own will not decrease, the shares of our common stock owned by our existing stockholders will represent a smaller percentage of our total outstanding shares of our common stock after any such issuance of shares of our common stock to Lincoln Park under the Purchase Agreement. There are substantial risks to our stockholders as a result of the sale and issuance of common stock to Lincoln Park under the Purchase Agreement. See “Risk Factors.”

Prior to entering into the Purchase Agreement with Lincoln Park, on June 16, 2020, we received stockholder approval pursuant to Nasdaq Listing Rules 5635(a), 5635(b) and 5635(d) to permit issuances of our common stock (including the issuance of more than 19.99% of our common stock) to Lincoln Park pursuant to the Purchase Agreement. Based on the closing price of our common stock of \$1.05 per share on March 16, 2020 (the lowest closing sale price since January 1, 2020 as reported on Nasdaq.com), the maximum number of shares we can issue and sell under the Purchase Agreement is approximately 23.8 million shares. Accordingly, we requested and received stockholder approval for the issuance of up to 23.8 million shares of our common stock under the Purchase Agreement. We would seek additional stockholder approval before issuing more than 23.8 million shares.

### The Offering

Shares of our common stock offered by the selling stockholder	Up to 1,519,000 shares of our common stock consisting of: <ul style="list-style-type: none"><li>• 180,701 Commitment Shares issued to Lincoln Park as a fee for making its irrevocable commitment to purchase our common stock under the Purchase Agreement; and</li><li>• up to 1,338,299 shares of our common stock that we may issue and sell to Lincoln Park from time to time under the Purchase Agreement from and after the commencement.</li></ul>
Shares of our common stock outstanding prior to this offering	4,779,584 shares of our common stock, which includes the 180,701 Commitment Shares issued to Lincoln Park as a fee for making its irrevocable commitment to purchase our common stock under the Purchase Agreement.
Shares of our common stock to be outstanding after giving effect to the issuance of the additional 1,338,299 shares of our common stock reserved for issuance and sale in this offering under the Purchase Agreement	6,110,345 shares of our common stock.
Use of proceeds	We will receive no proceeds from the sale of shares of our common stock by Lincoln Park in this offering. We may receive up to \$25.0 million aggregate gross proceeds under the Purchase Agreement from any sales of shares of our common stock we make to Lincoln Park pursuant to the Purchase Agreement after the commencement. Any proceeds that we receive from sales of shares of our common stock to Lincoln Park under the Purchase Agreement will be used for working capital and general corporate purposes. See “Use of Proceeds.”
Nasdaq symbol for our common stock	“PSTV”
Risk Factors	This investment involves a high degree of risk. See “Risk Factors” beginning on page 6 of this prospectus for a discussion of factors you should carefully consider before deciding to invest in our securities.

Unless otherwise noted, the number of shares of common stock to be outstanding immediately after this offering is based on 4,779,584 shares outstanding as of October 27, 2020 and excludes:

- 531,336 shares of common stock issuable upon exercise of stock options outstanding as of October 27, 2020 under our equity incentive plans, with a weighted-average exercise price of \$10.01 per share;
- 210,389 shares of common stock reserved for future issuance under our 2015 New Employee Incentive Plan; and
- 159,939 shares of common stock reserved for future issuance under our 2020 Stock Incentive Plan;
- 3,113,625 shares of common stock issuable upon the exercise of warrants to purchase common stock outstanding as of October 27, 2020, with a weighted-average exercise price of \$2.62 per share.



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To the extent that additional shares are issued pursuant to the foregoing, investors purchasing our common stock in this offering will experience further dilution. In addition, we may offer other securities in other offerings due to market conditions or strategic considerations. To the extent we issue such securities, investors may experience further dilution.

## 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” sections of our most recent Annual Report on Form 10-K and Quarterly Reports on Form 10-Q filed with the SEC and incorporated by reference into this prospectus. In addition, the following risk factors present material risks and uncertainties associated with this 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**

***The report of our independent registered public accounting firm contains an emphasis paragraph regarding the substantial doubt about our ability to continue as a “going concern.”***

The audit report of our independent registered public accounting firm covering the December 31, 2019 consolidated financial statements contains an explanatory paragraph that states that our recurring losses from operations, liquidity position, and debt service requirements raises substantial doubt about our ability to continue as a going concern. This going concern opinion could materially limit our ability to raise additional funds through the issuance of new debt or equity securities or otherwise. Future reports on our financial statements may also include an explanatory paragraph with respect to our ability to continue as a going concern. To date, our operating losses have been funded primarily from outside sources of invested capital and gross profits. We have had, and we will likely continue to have, an ongoing need to raise additional cash from outside sources to fund our future operations. However, no assurance can be given that additional capital will be available when required or on terms acceptable to us. If we are unsuccessful in our efforts to raise any such additional capital, we may be required to take actions that could materially and adversely harm our business, including a possible significant reduction in our research, development and administrative operations (including reduction of our employee base), the surrender of our rights to some technologies or product opportunities, delay of our clinical trials or regulatory and reimbursement efforts, or the curtailment or cessation of operations. We also cannot give assurance that we will achieve sufficient revenues in the future to achieve profitability and cash flow positive operations to allow us to continue as a going concern. The perception that we may not be able to continue as a going concern may cause third parties to choose not to deal with us due to concerns about our ability to meet our contractual obligations, which could have a material adverse effect on our business.

***The sale or issuance of our common stock to Lincoln Park may cause dilution and the sale of the shares of common stock acquired by Lincoln Park, or the perception that such sales may occur, could cause the price of our common stock to fall.***

On September 30, 2020, we entered into the Purchase Agreement with Lincoln Park, pursuant to which Lincoln Park has committed to purchase up to \$25.0 million of our common stock, subject to certain limitations. Upon the execution of the Purchase Agreement, we issued 180,701 Commitment Shares to Lincoln Park in consideration for its commitment to purchase additional shares of our common stock under the Purchase Agreement. The remaining shares of our common stock that may be issued under the Purchase Agreement may be sold by us to Lincoln Park at our discretion from time to time over a 36-month period commencing after the satisfaction of certain conditions set forth in the Purchase Agreement, including that the SEC has declared effective the registration statement that includes this prospectus and that such registration statement remains effective. The purchase price for the shares that we may sell to Lincoln Park under the Purchase Agreement will fluctuate based on the price of our common stock. Depending on market liquidity at the time, sales of such shares may cause the trading price of our common stock to fall.

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We generally have the right to control the timing and amount of any future sales of our shares to Lincoln Park. Additional sales of our common stock, if any, to Lincoln Park will depend upon market conditions and other factors to be determined by us. We may ultimately decide to sell to Lincoln Park all, some, or none of the additional shares of our common stock that may be available for us to sell pursuant to the Purchase Agreement. If and when we do sell shares to Lincoln Park, after Lincoln Park has acquired the shares, Lincoln Park may resell all or some of those shares at any time or from time to time in its discretion. Therefore, sales to Lincoln Park by us could result in substantial dilution to the interests of other holders of our common stock. Additionally, the sale of a substantial number of shares of our common stock to Lincoln Park, or the anticipation of such sales, could make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect sales.

***We may require additional financing to sustain our operations, without which we may not be able to continue operations, and the terms of subsequent financings may adversely impact our stockholders.***

We may direct Lincoln Park to purchase up to \$25.0 million worth of shares of our common stock from time to time under the Purchase Agreement over a 36-month period generally in amounts up to 50,000 shares of our common stock, which may be increased to up to 100,000 shares of our common stock depending on the market price of our common stock at the time of sale, provided that Lincoln Park's committed obligation under such single Regular Purchase shall not exceed \$500,000.

Depending on the prevailing market price of our common stock, we may not be able to sell shares to Lincoln Park for the maximum \$25.0 million over the term of the Purchase Agreement. We obtained stockholder approval to issue up to 23.8 million shares of common stock at our 2020 annual stockholders' meeting. We will need to seek additional stockholder approval before issuing more than 23.8 million shares. We are not required or permitted to issue any shares of common stock under the Purchase Agreement if such issuance would breach our obligations under the rules or regulations of The Nasdaq Stock Market. In addition, Lincoln Park will not be required to purchase any shares of our common stock if such sale would result in Lincoln Park's beneficial ownership exceeding 4.99% of the then outstanding shares of our common stock. Our inability to access a portion or the full amount available under the Purchase Agreement, in the absence of any other financing sources, could have a material adverse effect on our business.

The extent we rely on Lincoln Park as a source of funding will depend on a number of factors including the prevailing market price of our common stock and the extent to which we are able to secure working capital from other sources. If obtaining sufficient funding from Lincoln Park were to prove unavailable or prohibitively dilutive, we will need to secure another source of funding in order to satisfy our working capital needs. Even if we sell all \$25.0 million of shares of our common stock under the Purchase Agreement to Lincoln Park, we may still need additional capital to finance our future production plans and working capital needs, and we may have to raise funds through the issuance of equity or debt securities. Assuming a purchase price of \$2.56 (which represents the closing price of our common stock on September 30, 2020), the purchase by Lincoln Park of the entire 1,338,299 additional shares being registered hereunder would result in gross proceeds to us of only \$3,425,866.

Depending on the type and the terms of any financing we pursue, stockholders' rights and the value of their investment in our common stock could be reduced. A financing could involve one or more types of securities including common stock, convertible debt or warrants to acquire common stock. These securities could be issued at or below the then prevailing market price for our common stock. In addition, if we issue secured debt securities, the holders of the debt would have a claim to our assets that would be prior to the rights of stockholders until the debt is paid. Interest on these debt securities would increase costs and negatively impact operating results. If the issuance of new securities results in diminished rights to holders of our common stock, the market price of our common stock could be negatively impacted.

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Should the financing we require to sustain our working capital needs be unavailable or prohibitively expensive when we require it, the consequences could be a material adverse effect on our business, operating results, financial condition and prospects.

***Our management will have broad discretion over the use of the net proceeds from our sale of shares of common stock to Lincoln Park, 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 our sale of shares of common stock to Lincoln Park, and we 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 those 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 those 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.

### **Risks Related to our Business and Industry**

***The COVID-19 pandemic could adversely affect our business, results of operations, and financial condition.***

The effects of the COVID-19 pandemic on our business continue to evolve and are difficult to predict. To date, the COVID-19 pandemic has significantly and negatively impacted the global economy, and the magnitude, severity, and duration of this impact is unclear and difficult to assess. To combat the spread of COVID-19, the United States and other locations in which we operate have imposed measures such as quarantines and “shelter-in-place” orders that are restricting business operations and travel and requiring individuals to work from home (“WFH”), which has impacted all aspects of our business as well as those of the third-parties with which we collaborate or upon which we rely for certain supplies and services. While certain states and regions across the United States have subsequently relaxed various restrictions on businesses and other activities, some of these areas, it is uncertain whether and to what extent federal, state, or local governments may reinstate additional restrictions and safety protocols in response to any increases in COVID-19 cases. The continuation of WFH and other restrictions for an extended period of time may negatively impact our productivity, research and development, operations, preclinical studies, clinical trials, business and financial results. Among other things, the COVID-19 pandemic may result in:

- a global economic recession or depression that could significantly and negatively impact our business or those of third parties upon which we rely for services and supplies;
- constraints on our ability to conduct our operations and our preclinical studies and clinical trials;
- constraints on our ability to partner with other companies to commercialize our product candidates;
- constraints on our business strategy to aggressively develop our Nanomedicine platforms;
- reduced productivity in our business operations, research and development, marketing, and other activities;
- disruptions to our third-party manufacturers and suppliers;
- increased costs resulting from WFH or from our efforts to mitigate the impact of COVID-19; and
- reduced access to financing to fund our operations due to a deterioration of credit and financial markets.

The continued disruption of the COVID-19 pandemic may negatively and materially impact our operating and financial operating results, including our cash flows. The resumption of normal business operations may be

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delayed and a resurgence of COVID-19 could occur, which would result in continued disruption to us or third parties with whom we do business. As a result, the effects of the COVID-19 pandemic could have a material adverse impact on our business, results of operations and financial condition for the remainder of 2020 and beyond.

***We will need substantial additional funding to develop our products and conduct our future operations and to repay our outstanding debt obligations, and the impact of the COVID-19 pandemic on the financial markets will likely negatively impact our ability to raise additional financing. If we are unable to obtain the funds necessary to do so, we may be required to delay, scale back or eliminate our product development activities or may be unable to continue our business operations.***

We do not currently believe that our cash resources will be sufficient to fund the development and marketing efforts required to reach profitability without raising additional capital in the near future. We will also continue to require substantial additional capital to continue our clinical development and potential commercialization activities and to pay our debt obligations. As a result, we have had, and we will continue to have, an ongoing need to raise additional capital from outside sources to continue funding our operations, including our continuing substantial research and development expenses. The amount and timing of our future funding requirements will depend on many factors, including the pace and results of our clinical development efforts.

We have secured capital historically from grant revenues, collaboration proceeds, and debt and equity offerings. To obtain additional capital, we may pursue debt and/or equity financing arrangements, strategic corporate partnerships, state and federal development programs, licensing arrangements, and sales of assets or debt or equity securities. On September 30, 2020, we entered into a new equity line facility with Lincoln Park to provide additional capital. We cannot be certain that additional capital will be available on terms acceptable to us, in a timely manner, or at all. If we are unsuccessful in our efforts to raise any such additional capital, we may be required to take actions that could materially and adversely harm our business, including a possible significant reduction in our research, development and administrative operations (including reduction of our employee base), the surrender of our rights to some technologies or product opportunities, delay of our clinical trials or regulatory and reimbursement efforts, or curtailment or cessation of operations. Further, if we are unable to raise additional capital, we may be unable to satisfy the covenants or meet our repayment obligations under our existing loan agreement.

The global economic downturn and deterioration of the credit and financial markets may impair our ability to obtain additional financing through other means, such as strategic agreements or debt financing. Further any debt financing may contain restrictive covenants which limit our operating flexibility and any equity financing will likely result in additional and possibly significant dilution to existing stockholders. Failure to raise sufficient capital, as and when needed, would have a significant and negative impact on our financial condition and our ability to develop our product candidates.

***The disruption and volatility in the global capital markets may impact our ability to obtain additional debt financings and may limit our ability to modify our existing debt facilities and increase the risk of non-compliance with covenants under our existing loan agreement.***

Under the Loan and Security Agreement dated May 29, 2015, Oxford Finance, LLC, or Oxford, made a term loan to us in an aggregate principal amount of \$17.7 million (the "Term Loan") subject to the terms and conditions set forth therein. As of September 30, 2020, the outstanding principal balance of the Term Loan was \$4.3 million subsequent to a repayment of \$5.0 million on April 1, 2020 pursuant to the Ninth Amendment to the Loan and Security Agreement.

The Term Loan accrues interest at a floating rate equal to the three-month LIBOR rate (with a floor of 1.00%) plus 7.95% per annum. On March 29, 2020, we and Oxford amended the Loan and Security Agreement

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to extend the interest-only period. Beginning May 1, 2021, we will be required to make payments of principal and accrued interest in equal monthly installments to amortize the Term Loan through June 1, 2024, the new maturity date.

As security for our obligations under the Loan and Security Agreement, we granted a security interest in substantially all of our existing and after-acquired assets, excluding our intellectual property assets, subject to certain exceptions set forth in the Loan and Security Agreement. If we are unable to discharge these obligations, Oxford could foreclose on these assets, which would, at a minimum, have a severe material adverse effect on our ability to operate our business.

Our indebtedness to Oxford could adversely affect our operations and liquidity, by, among other things:

- causing us to use a larger portion of our cash flow to fund interest and principal payments, reducing the availability of cash to fund working capital and capital expenditures and other business activities;
- making it more difficult for us to take advantage of significant business opportunities, such as acquisition opportunities, and to react to changes in market or industry conditions; and
- limiting our ability to borrow additional monies in the future to fund working capital and capital expenditures and for other general corporate purposes.

The Loan and Security Agreement, as amended, requires us to maintain at least \$2.0 million in unrestricted cash and/or cash equivalents and includes certain reporting and other covenants, that, among other things, restrict our ability to (i) dispose of assets, (ii) change the business we conduct, (iii) make acquisitions, (iv) engage in mergers or consolidations, (v) incur additional indebtedness, (vi) create liens on assets, (vii) maintain any collateral account, (viii) pay dividends, (ix) make investments, loans or advances, (x) engage in certain transactions with affiliates, and (xi) prepay certain other indebtedness or amend other financing arrangements. If we fail to comply with any of these covenants or restrictions, such failure may result in an event of default, which if not cured or waived, could result in Oxford causing the outstanding loan amount to become immediately due and payable. If the maturity of our indebtedness is accelerated, we may not have, or be able to timely procure, sufficient cash resources to satisfy our debt obligations, and such acceleration would adversely affect our business and financial condition.

The COVID-19 pandemic has severely impacted the global economic activity and caused significant volatility and negative pressure in the financial markets. This volatility and downturn may affect our business, liquidity position, and financial results. This in turn may negatively impact our ability to remain in compliance with the financial and operating covenants under the Loan and Security Agreement and may restrict our ability to obtain covenant waivers, restructure or amend the terms of our existing debt, or obtain additional debt financing. If the maturity of our indebtedness is accelerated or if we are unable to amend the terms or obtain any necessary waivers under our debt facilities or obtain additional debt or other financing, it would materially and adversely affect our liquidity position and ability to fund our operations. This in turn would materially harm our business and financial conditions.

### ***Our operating results have been and will likely continue to be volatile.***

Our prospects must be evaluated in light of the risks and difficulties frequently encountered by emerging companies and particularly by such companies in rapidly evolving and technologically advanced biotech, pharmaceutical and medical device fields. Our visibility as to our future operating results and our clinical development timeline may be further limited by the impact of the ongoing COVID-19 pandemic. From time to time, we have tried to update our investors' expectations as to our operating results. If we revise any timelines we may give with respect to our clinical trials, it could materially harm our reputation and the market's perception of us, and could cause our stock price to decline.

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***We rely on third parties to conduct our clinical trials, manufacture our product candidates, and perform other services. If these parties are not able to successfully perform due to the impact of the COVID-19 pandemic or otherwise, we may not be able to successfully complete clinical development, obtain regulatory approval or commercialize our product candidates and our business could be substantially harmed.***

We rely on third parties in the performance of many of the clinical trial functions, including contract research organizations, that help execute our clinical trials, the hospitals and clinics at which our trials are conducted, the clinical investigators at the trial sites, and other third-party service providers. Failure of any third-party service provider to adhere to applicable trial protocols, laws and regulations in the conduct of one of our clinical trials could adversely affect the conduct and results of such trial (including possible data integrity issues), which could seriously harm our business. The COVID-19 pandemic has placed a strain on hospitals and clinics, contract research organizations, and other providers of clinical and medical supplies and equipment. This in turn could impact the ability of third parties such as hospitals to support our clinical trials or perform other services in support of our clinical programs. In addition, third parties may not prioritize our clinical trials relative to those of other customers due to resource or other constraints as a result of the COVID-19 pandemic. We may experience enrollment at a slower pace at certain of our clinical trial sites than initially anticipated. Further, our clinical trial sites may be required to suspend enrollment due to travel restrictions, workplace safety concerns, quarantine, facility closures, and other governmental restrictions. Some of our clinical trial sites have imposed limited accessibility to conduct clinical monitoring and training on-site. As a result, results from our clinical trials may be delayed, which in turn would have a material adverse impact on our clinical trial plans and timelines and impair our ability to successfully complete clinical development, obtain regulatory approval, or commercialize our product candidates. This in turn would substantially harm our business and operations.

***We rely on third-party suppliers for certain components and raw materials and our development and commercialization of any of our product candidates could be stopped, delayed or made less profitable if those third parties are unable to provide us with sufficient quantities of such components or raw materials or are unable to do so at acceptable quality levels or prices due to the COVID-19 pandemic or otherwise.***

We acquire some of our components and other raw materials from sole source suppliers. If there is an interruption in supply of our raw materials from a sole source supplier, there can be no assurance that we will be able to obtain adequate quantities of the raw materials within a reasonable time or at commercially reasonable prices. Interruptions in supplies due to pricing, timing, availability, the COVID-19 pandemic, or other issues with our sole source suppliers could have a negative impact on our ability to manufacture products and product candidates, which in turn could adversely affect the development and commercialization of our Nanomedicine product candidates and cause us to potentially breach our supply or other obligations under our agreements with certain other counterparties.

The COVID-19 pandemic has placed a significant strain on the pharmaceutical and medical industries, manufacturers of clinical supplies, and healthcare-related supplies and resources in general. For instance, we have experienced increased difficulties in obtaining certain materials for manufacturing that are also components of COVID vaccine candidates. The impact of the COVID-19 pandemic has exacerbated the risks to which we are subject due to our reliance on third-party (and in some cases, sole source) suppliers. Additionally, our suppliers may experience operational difficulties and resource constraints due to the impact of the COVID-19 pandemic. If our third-party suppliers were to encounter any of these difficulties, or otherwise fail to comply with their contractual obligations, our ability to provide our product candidates to patients in clinical trials would be jeopardized. Any delay or interruption in the procurement of clinical trial supplies could delay the completion of clinical trials, increase the costs associated with maintaining clinical trial programs and, depending upon the period of delay, require us to commence new clinical trials at additional expense or terminate clinical trials completely.

***Due to our limited number of employees, our operations could be significantly and disproportionately impacted if any of our personnel were to test positive for COVID-19.***

We maintain a very small executive team and have a limited number of employees. The manufacturing of our oncology drug assets is a highly complex process that requires significant experience and know-how. We also depend on the personal efforts and abilities of the principal members of our senior management and scientific staff to provide strategic direction, manage our operations, and maintain a cohesive and stable environment. In particular, we are highly dependent on our executive officers, especially Marc Hedrick, M.D., our Chief Executive Officer. If any of our personnel were to test positive for COVID-19, it would likely significantly impair our operations. The loss of services of any of our personnel, including Dr. Hedrick, particularly for an extended period due to COVID-19 or otherwise, would likely result in product development delays or the failure of our collaborations with current and future collaborators, which, in turn, may impede or delay our ability to develop and commercialize products and generate revenues. In addition, it could also result in difficulty to obtain additional funding for our development of products and our future operations.

***We may face business disruption and related risks resulting from the COVID-19 pandemic and President Trump's invocation of the Defense Production Act, either of which could have a material adverse effect on our business.***

Our development programs could be disrupted and materially adversely affected by the COVID-19 pandemic. As a result of measures imposed by the governments in affected regions, many commercial activities, businesses and schools have been suspended as part of quarantines and other measures intended to contain this outbreak. The spread of COVID-19 worldwide has resulted in the International Health Regulations Emergency Committee of the World Health Organization declaring the outbreak of COVID-19 as a “public health emergency of international concern,” and the World Health Organization characterizing COVID-19 as a pandemic. International stock markets have also been significantly impacted and their volatility reflect the uncertainty associated with the potential economic impact of the outbreak. The volatility in the Dow Industrial Average since the end of February 2020 has been largely attributed to the effects of the COVID-19 pandemic. In response to the COVID-19 pandemic, President Trump invoked the Defense Production Act, codified at 50 U.S.C. §§ 4501 et seq. (the “Defense Production Act”). Pursuant to the, Defense Production Act the federal government may, among other things, require domestic industries to provide essential goods and services needed for the national defense. While we have not experienced any significant impact on our business as a result of the COVID-19 pandemic, we continue to assess the potential impact COVID-19 and the invocation of the Defense Production Act may have on our ability to effectively conduct our commercialization efforts and development programs and otherwise conduct our business operations as planned. There can be no assurance that we will not be further impacted by the COVID-19 pandemic or by any action taken by the federal government under the Defense Production Act, including downturns in business sentiment generally or in our industry and business in particular.

**Risks Related to our Common Stock**

***The market price of our common stock is volatile and may continue to fluctuate significantly, which could result in substantial losses for stockholders.***

The market price of our common stock has been, and may continue to be, subject to significant fluctuations. Among the factors that may cause the market price of our common stock to fluctuate are the risks described in this “Risk Factors” section and other factors, including:

- 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;



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- 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;
- the impact of the COVID-19 impact, including the magnitude, severity, duration, and uncertainty of the downturn in the domestic and global economies and financial markets;
- 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 financial markets may experience a loss of investor confidence or otherwise experience continued volatility and deterioration due to the COVID-19 pandemic. 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.

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

The Nasdaq Stock Market has experienced significant volatility due to the COVID-19 pandemic, which has also impacted our stock price. In addition, we have a limited public float and our stock price has experienced a significant decline since our corporate restructuring in 2019. Between January 1, 2020 and September 30, 2020, our closing stock price has fluctuated from a high of \$3.14 at September 16, 2020 to a low of \$1.05 at March 23, 2020. In addition, Nasdaq requires listing issuers to comply with certain standards in order to remain listed on its exchange.

For example, 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 met 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. Based on our stockholders' equity of \$2.6 million as of September 30, 2020, we met the minimum stockholders' equity requirement for continued listing on the Nasdaq Capital Market under Nasdaq Listing Rule 5550(b)(1). However, there is no guarantee that we will continue to meet the listing requirement under Nasdaq Listing Rule 5550(b)(1), and if we fail to meet such requirement in the future, there is a risk that our common stock may be delisted from Nasdaq, which would adversely impact liquidity of our common stock and potentially result in even lower bid prices for our common stock.

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If, for any reason, Nasdaq were to delist our securities from trading on its exchange and we are unable to obtain listing on another reputable national securities exchange, a reduction in some or all of the following may occur, each of which could materially adversely affect our stockholders:

- the liquidity and marketability of our common stock;
- the market price of our common stock;
- our ability to obtain financing for the continuation of our operations;
- the number of institutional and general investors that will consider investing in our common stock;
- the number of market makers in our common stock;
- the availability of information concerning the trading prices and volume of our common stock; and
- the number of broker-dealers willing to execute trades in shares of our common stock.

In addition, 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 over-the-counter markets, our stock may be traded as a “penny stock” which would make transactions in our stock more difficult and cumbersome, and 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 further decline.

***Future sales of our common stock could cause dilution, and the sale of such common stock, or the perception that such sales may occur, could cause the price of our stock to decline.***

Sales of additional shares of our common stock, as well as securities convertible into or exercisable for common stock, could result in substantial dilution to our stockholders and cause the market price of our common stock to decline. An aggregate of 4,779,584 shares of common stock were outstanding as of October 27, 2020. As of such date, another 3,652,461 shares of common stock were issuable upon exercise of outstanding options and warrants. A substantial majority of the outstanding shares of our common stock, as well as a substantial majority of the shares of common stock issuable upon exercise of outstanding options, are freely tradable without restriction or further registration under the Securities Act.

We may sell additional shares of common stock, as well as securities convertible into or exercisable for common stock, in subsequent public or private offerings. We may also issue additional shares of common stock, as well as securities convertible into or exercisable for common stock, to finance future acquisitions. We will need to raise additional capital in order to initiate or complete additional development activities for all of our product candidates, or to pursue additional disease indications for our product candidates, and this may require us to issue a substantial amount of securities (including common stock as well as securities convertible into or exercisable for common stock). There can be no assurance that our capital raising efforts will be able to attract the capital needed to execute on our business plan and sustain our operations. Moreover, we cannot predict the size of future issuances of our common stock, as well as securities convertible into or exercisable for common stock, or the effect, if any, that future issuances and sales of our securities will have on the market price of our common stock. Sales of substantial amounts of our common stock, as well as securities convertible into or exercisable for common stock, including shares issued in connection with an acquisition or securing funds to complete any clinical trial plans, or the perception that such sales could occur, may result in substantial dilution and may adversely affect prevailing market prices for our common stock.

## FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated herein by reference contain forward-looking statements which are made pursuant to the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Statements other than statements of historical fact constitute “forward-looking statements.” These forward-looking statements do not constitute guarantees of future performance. These forward-looking statements may be identified by terms such as “intend,” “expect,” “believe,” “anticipate,” “will,” “should,” “would,” “could,” “may,” “designed,” “potential,” “evaluate,” “progressing,” “proceeding,” “exploring,” “hopes,” and similar expressions, or the negative of such expressions. Such statements are based upon certain assumptions and assessments made by our management in light of their experience and their perception of historical trends, current conditions, expected future developments and other factors they believe to be appropriate.

These statements include, without limitation, statements regarding: our anticipated expenditures, including research and development, sales and marketing, and general and administrative expenses; our ability to benefit from the NIH/NCI award for continued clinical development of RNL™ for recurrent glioblastoma; the ability of RNL™ to safely and effectively deliver radiation directly to the tumor at large doses; the duration of any therapies employing RNL™; our ability to expand testing of RNL™ to additional sites; the potential size of the market for our products; future development and/or expansion of our products and therapies in our markets; our ability to generate product or development revenues and the sources of such revenue; the amounts that we will be obligated to pay under license agreements; our ability to effectively manage our gross profit margins; our ability to obtain and maintain regulatory approvals; expectations as to our future performance; portions of the “Liquidity and Capital Resources” section of our annual and quarterly reports filed with the SEC; our ability to fully access our equity line with Lincoln Park; our need for additional financing and the availability thereof; any changes to our interest expenses; 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; our expectations as to the impact of recently issued or adopted accounting standards; our expectations as to the impact of the COVID-19 pandemic on our business and operating results; our beliefs as to the impact of any liability that may arise as a result of any legal proceedings; and the potential enhancement of our cash position through development, marketing, and licensing arrangements.

Our actual results may differ, including materially, from those anticipated in these forward-looking statements as a result of various risks and uncertainties. These risks and uncertainties include, but are not limited to, those risks discussed in this prospectus under “Risk Factors,” the risks described under “Part I—Item 1A—Risk Factors” in our Annual Report on Form 10-K for the year ended December 31, 2019, and under “Part II, Item 1A—Risk Factors” in our Quarterly Reports on Form 10-Q, both of which are incorporated herein by reference, as well as, without limitation, risks associated with:

- uncertainties relating to the clinical trials of our product candidates and therapies;
- the outcome of our partnering/licensing efforts;
- risks associated with laws or regulatory requirements applicable to us;
- the strategies, prospects, plans, expectations and objectives of management for future operations, including the anticipated timing of regulatory submissions or actions;
- public health crises, pandemics and epidemics, such as the novel strain of coronavirus (COVID-19), and their effects on our preclinical and planned clinical activities;
- our need and ability to raise additional capital to continue our development programs;
- market conditions;
- the progress, scope or duration of the development of product candidates or programs;

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- the benefits that may be derived from product candidates or the commercial or market opportunity in any target indication;
- our ability to protect our intellectual property rights;
- our anticipated operations, financial position, costs or expenses;
- statements regarding future economic conditions or performance;
- statements concerning proposed new products, services or developments;
- statements of belief and any statement of assumptions underlying any of the foregoing;
- our ability to sell shares of common stock to Lincoln Park pursuant to the terms of the Purchase Agreement and our ability to register and maintain the registration of the shares issued and issuable thereunder; and
- our anticipated use of the net proceeds from the potential sale of shares of our common stock to Lincoln Park.

We encourage you to read these risks carefully. We caution you not to place undue reliance on the forward-looking statements contained or incorporated by reference in this prospectus. These forward-looking statements speak only as of the date made. We assume no obligation or undertaking to update any forward-looking statements to reflect any changes in expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based. You should, however, review additional disclosures we make in the reports we file with the SEC.

## THE LINCOLN PARK TRANSACTION

### General

On September 30, 2020, we entered into the Purchase Agreement with Lincoln Park, pursuant to which Lincoln Park has agreed to purchase from us up to an aggregate of \$25.0 million of our common stock (subject to certain limitations) from time to time over the term of the Purchase Agreement. Also on September 30, 2020, we entered into the Registration Rights Agreement, pursuant to which we filed with the SEC the registration statement that includes this prospectus to register for resale under the Securities Act the shares of our common stock that have been or may be issued to Lincoln Park under the Purchase Agreement.

This prospectus covers the resale by the selling stockholder of up to 1,519,000 shares of our common stock, comprised of: (i) 180,701 Commitment Shares that we issued to Lincoln Park as a fee for making its irrevocable commitment to purchase our common stock under the Purchase Agreement, and (ii) up to an additional 1,338,299 shares of our common stock that we have reserved for sale to Lincoln Park under the Purchase Agreement from time to time after the date of this prospectus, if and when we determine to sell additional shares of our common stock to Lincoln Park under the Purchase Agreement.

Other than the 180,701 Commitment Shares that we issued to Lincoln Park as a fee for making its irrevocable commitment to purchase our common stock under the Purchase Agreement, we do not have the right to commence any sales of our common stock to Lincoln Park under the Purchase Agreement until all of the conditions set forth in the Purchase Agreement have been satisfied, including that the SEC has declared effective the registration statement that includes this prospectus registering the shares of our common stock that have been and may be issued and sold to Lincoln Park under the Purchase Agreement. From and after the commencement, we may, from time to time and at our sole discretion for a period of 36-months, on any business day that we select on which the closing sale price of our common stock equals or exceeds \$0.25 per share, direct Lincoln Park to purchase in a Regular Purchase up to 50,000 shares of our common stock, which amount may be increased depending on the market price of our common stock at the time of sale, subject to a maximum commitment of \$500,000 per Regular Purchase. In addition, at our discretion, Lincoln Park has committed to purchase other “accelerated amounts” and/or “additional accelerated amounts” under certain circumstances. We will control the timing and amount of any sales of our common stock to Lincoln Park. The purchase price of the shares of our common stock that may be sold to Lincoln Park in Regular Purchases under the Purchase Agreement will be based on the market price of our common stock immediately preceding the time of sale as computed under the Purchase Agreement. The purchase price per share will be equitably adjusted as provided in the Purchase Agreement for any reorganization, recapitalization, non-cash dividend, stock split, or other similar transaction as set forth in the Purchase Agreement. We may at any time in our sole discretion terminate the Purchase Agreement without fee, penalty or cost upon one business day notice. There are no restrictions on future financings, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement or Registration Rights Agreement, other than a prohibition on our entering into certain types of transactions that are defined in the Purchase Agreement as “Variable Rate Transactions.” Lincoln Park may not assign or transfer its rights and obligations under the Purchase Agreement.

As of September 29, 2020, there were 4,591,415 shares of our common stock outstanding, of which 4,559,248 shares of our common stock were held by non-affiliates. Although the Purchase Agreement provides that we may sell up to an aggregate of \$25.0 million of our common stock to Lincoln Park, only 1,519,000 shares of our common stock are being registered for resale under this prospectus, which represents the 180,701 Commitment Shares that we issued to Lincoln Park as a fee for making its irrevocable commitment to purchase our common stock under the Purchase Agreement and an additional 1,338,299 shares of our common stock that we may issue and sell to Lincoln Park in the future under the Purchase Agreement, if and when we sell shares of our common stock to Lincoln Park under the Purchase Agreement. Depending on the market prices of our common stock at the time we elect to issue and sell shares of our common stock to Lincoln Park under the Purchase Agreement, we may need to register for resale under the Securities Act additional shares of our common stock in order to receive aggregate gross proceeds equal to the \$25.0 million total commitment available to us under the Purchase

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Agreement. If all of the 1,338,299 shares of our common stock that may be sold to Lincoln Park in the future under the Purchase Agreement that are being registered for resale hereunder were issued and outstanding as of the date of this prospectus (without taking into account the 19.99% stockholder approval limitation), such shares of our common stock, taken together with the 180,701 Commitment Shares that we issued to Lincoln Park as a fee for making its irrevocable commitment to purchase our common stock under the Purchase Agreement and outstanding as of the date of this prospectus, would represent approximately 33.1% of the total number of shares of our common stock outstanding and approximately 33.3% of the total number of outstanding shares of our common stock held by non-affiliates, in each case as of the date of this prospectus, in each case as of September 29, 2020. If we elect to issue and sell to Lincoln Park under the Purchase Agreement more than the additional 1,338,299 shares of our common stock being registered for resale by Lincoln Park under this prospectus, which we have the right, but not the obligation, to do, we must first register for resale under the Securities Act any such additional shares of our common stock, which could cause additional substantial dilution to our stockholders. The number of shares of our common stock ultimately offered for resale by Lincoln Park is dependent upon the number of shares of our common stock we ultimately decide to sell to Lincoln Park under the Purchase Agreement.

Under applicable Nasdaq rules, in no event may we issue or sell to Lincoln Park under the Purchase Agreement shares of our common stock in excess of the Exchange Cap of 917,823 shares (including the 180,701 Commitment Shares), which represents 19.99% of the shares of our common stock outstanding (based on 4,591,415 shares outstanding) immediately prior to the execution of the Purchase Agreement, unless (i) we obtain stockholder approval to issue shares of our common stock in excess of the Exchange Cap or (ii) the average price of all applicable sales of our common stock to Lincoln Park under the Purchase Agreement equals or exceeds \$3.1872 per share (which represents the lower of (A) the official closing price of our common stock on Nasdaq on the trading day immediately preceding the date of the Purchase Agreement and (B) the average official closing price of our common stock on Nasdaq for the five consecutive trading days ending on the trading day immediately preceding the date of the Purchase Agreement, plus an incremental amount of \$0.6272 attributable to the value of the Commitment Shares), so that such issuances and sales would be exempt from the Exchange Cap limitation under applicable Nasdaq rules. In any event, the Purchase Agreement specifically provides that we may not issue or sell any shares of our common stock under the Purchase Agreement if such issuance or sale would breach any applicable rules or regulations of The Nasdaq Stock Market.

The Purchase Agreement prohibits us from directing Lincoln Park to purchase any shares of our common stock if those shares of our common stock, when aggregated with all other shares of our common stock then beneficially owned by Lincoln Park and its affiliates, would result in Lincoln Park having beneficial ownership of shares of our common stock, as calculated pursuant to Section 13(d) of the Exchange Act and Rule 13d-3 thereunder, in excess of the Beneficial Ownership Cap at any time.

Issuances of our common stock to Lincoln Park under the Purchase Agreement will not affect the rights or privileges of our existing stockholders, except that the economic and voting interests of each of our existing stockholders will be diluted as a result of any such issuance. Although the number of shares of our common stock that our existing stockholders own will not decrease, the shares of our common stock owned by our existing stockholders will represent a smaller percentage of our total outstanding shares of our common stock after any such issuance of shares of our common stock to Lincoln Park under the Purchase Agreement.

Prior to entering into the Purchase Agreement with Lincoln Park, on June 16, 2020, we received stockholder approval pursuant to Nasdaq Listing Rules 5635(a), 5635(b) and 5635(d) to permit issuances of our common stock (including the issuance of more than 19.99% of our common stock) to Lincoln Park pursuant to the Purchase Agreement. Based on the closing price of our common stock of \$1.05 per share on March 16, 2020 (the lowest closing sale price since January 1, 2020 as reported on Nasdaq.com), the maximum number of shares we can issue and sell under the Purchase Agreement is approximately 23.8 million shares. Accordingly, we requested and received stockholder approval for the issuance of up to 23.8 million shares of our common stock under the Purchase Agreement. We would seek additional stockholder approval before issuing more than 23.8 million shares.

## **Purchase of Shares of our Common Stock under the Purchase Agreement**

Under the Purchase Agreement, from and after commencement, on any business day that we select on which the closing sale price of our common stock equals or exceeds \$0.25 per share, subject to adjustment, we may direct Lincoln Park to purchase up to 50,000 shares of our common stock in a Regular Purchase on such business day, provided, however, that the Regular Purchase may be increased to up to 100,000 shares of our common stock, provided that the closing sale price of our common stock is not below \$2.50 on the purchase date (such share amount limitation, the “Regular Purchase Share Limit”). In each case, Lincoln Park’s maximum commitment in any single Regular Purchase may not exceed \$500,000. The Regular Purchase Share Limit is subject to proportionate adjustment in the event of a reorganization, recapitalization, non-cash dividend, stock split or other similar transaction; provided, that if after giving effect to such full proportionate adjustment, the adjusted Regular Purchase Share Limit would preclude us from requiring Lincoln Park to purchase shares of our common stock at an aggregate purchase price equal to or greater than \$150,000 in any single Regular Purchase, then the Regular Purchase Share Limit will not be fully adjusted, but rather the Regular Purchase Share Limit for such Regular Purchase shall be adjusted as specified in the Purchase Agreement, such that, after giving effect to such adjustment, the Regular Purchase Share Limit will be equal to (or as close as can be derived from such adjustment without exceeding) \$150,000.

The purchase price per share for each such Regular Purchase will be equal to the lower of:

- the lowest sale price for our common stock on the purchase date for such shares of our common stock; and
- the arithmetic average of the three lowest closing sale prices for our common stock during the 10 consecutive business days ending on the business day immediately preceding the purchase date of such shares of our common stock.

In addition to Regular Purchases described above, we may also direct Lincoln Park, on any business day on which we have properly submitted a Regular Purchase notice directing Lincoln Park to purchase the maximum number of shares of our common stock that we are then permitted to include in a single Regular Purchase notice, to purchase an additional amount of our common stock, which we refer to as an Accelerated Purchase, not to exceed the lesser of:

- 30% of the aggregate number of shares of our common stock traded during all or, if certain trading volume or market price thresholds specified in the Purchase Agreement are crossed on the applicable Accelerated Purchase date, which is defined as the next business day following the purchase date for the corresponding Regular Purchase, the portion of the normal trading hours on the applicable Accelerated Purchase date prior to such time that any one of such thresholds is crossed, which period of time on the applicable Accelerated Purchase date we refer to as the Accelerated Purchase Measurement Period; and
- 300% of the number of purchase shares purchased pursuant to the corresponding Regular Purchase.

The purchase price per share for each such Accelerated Purchase will be equal to 96.5% of the lower of:

- the volume weighted average price of our common stock during the Accelerated Purchase Measurement Period on the applicable Accelerated Purchase date; and
- the closing sale price of our common stock on the applicable Accelerated Purchase date.

We may also direct Lincoln Park, not later than 1:00 p.m., Eastern time, on a business day on which an Accelerated Purchase has been completed and all of the shares of our common stock to be purchased thereunder (and under the corresponding Regular Purchase) have been properly delivered to Lincoln Park in accordance with the Purchase Agreement prior to such time on such business day, to purchase an additional amount of our common stock, which we refer to as an Additional Accelerated Purchase, of up to the lesser of:

- 30% of the aggregate number of shares of our common stock traded during a certain portion of the normal trading hours on such Accelerated Purchase date as determined in accordance with the Purchase

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Agreement, which period of time we refer to as the Additional Accelerated Purchase Measurement Period; and

- 300% of the number of purchase shares purchased pursuant to the Regular Purchase corresponding to the Accelerated Purchase that was completed on such Accelerated Purchase date on which an Additional Accelerated Purchase notice was properly received.

We may, in our sole discretion, submit multiple Additional Accelerated Purchase notices to Lincoln Park prior to 1:00 p.m., Eastern time, on a single Accelerated Purchase date, provided that all prior Accelerated Purchases and Additional Accelerated Purchases (including those that have occurred earlier on the same day) have been completed and all of the shares of our common stock to be purchased thereunder (and under the corresponding Regular Purchase) have been properly delivered to Lincoln Park in accordance with the Purchase Agreement.

The purchase price per share for each such Additional Accelerated Purchase will be equal to 95% of the lower of:

- the volume weighted average price of our common stock during the applicable Additional Accelerated Purchase Measurement Period on the applicable Additional Accelerated Purchase date; and
- the closing sale price of our common stock on the applicable Additional Accelerated Purchase date.

In the case of Regular Purchases, Accelerated Purchases and Additional Accelerated Purchases, the purchase price per share will be equitably adjusted for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction occurring during the business days used to compute the purchase price.

Other than as described above, there are no trading volume requirements or restrictions under the Purchase Agreement, and we will control the timing and amount of any sales of our common stock to Lincoln Park.

### **Minimum Share Price**

Under the Purchase Agreement, we and Lincoln Park may not effect any sales of shares of our common stock under the Purchase Agreement on any purchase date that the closing sale price of our common stock is less than the floor price of \$0.25 per share of common stock, which will be appropriately adjusted for any reorganization, recapitalization, non-cash dividend, stock split or other similar transaction. Upon consummation of any such reorganization, recapitalization, non-cash dividend, stock split or other similar transaction, the adjusted floor price per share of common stock will be the lower of (i) the adjusted price and (ii) \$1.00.

### **Events of Default**

Events of default under the Purchase Agreement include the following:

- the effectiveness of the registration statement of which this prospectus forms a part lapses for any reason (including, without limitation, the issuance of a stop order), or any required prospectus supplement and accompanying prospectus are unavailable for the resale by Lincoln Park of our common stock offered hereby, and such lapse or unavailability continues for a period of 10 consecutive business days or for more than an aggregate of 30 business days in any 365-day period;
- suspension by our principal market of our common stock from trading for a period of one business day;
- the de-listing of our common stock from the Nasdaq Capital Market, our principal market, provided our common stock is not immediately thereafter trading on the New York Stock Exchange, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, the NYSE American, the NYSE Arca, or the OTCQX Best Market or the OTCQB Venture Market operated by OTC Markets Group Inc. (or nationally recognized successor thereto);



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- the failure of our transfer agent to issue to Lincoln Park shares of our common stock within two business days after the applicable date on which Lincoln Park is entitled to receive such shares of our common stock;
- any breach of the representations or warranties or covenants contained in the Purchase Agreement or Registration Rights Agreement that has or could have a material adverse effect on us and, in the case of a breach of a covenant that is reasonably curable, that is not cured within five business days;
- any voluntary or involuntary participation or threatened participation in insolvency or bankruptcy proceedings by or against us;
- if at any time we are not eligible to transfer our common stock electronically; or
- if at any time the Exchange Cap (to the extent applicable under the terms of the Purchase Agreement) is reached and our stockholders have not approved the issuance of common stock in excess of the Exchange Cap in accordance with applicable Nasdaq rules.

Lincoln Park does not have the right to terminate the Purchase Agreement upon any of the events of default set forth above. During an event of default, all of which are outside of Lincoln Park's control, we may not direct Lincoln Park to purchase any shares of our common stock under the Purchase Agreement.

### **Our Termination Rights**

We have the unconditional right, at any time, for any reason and without any payment or liability to us, to give notice to Lincoln Park to terminate the Purchase Agreement. In the event of bankruptcy proceedings by or against us, the Purchase Agreement will automatically terminate without action of any party.

### **No Short-Selling or Hedging by Lincoln Park**

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

### **Prohibitions on Variable Rate Transactions**

There are no restrictions on future financings, rights of first refusal, participation rights, penalties or liquidated damages in the Purchase Agreement or Registration Rights Agreement other than a prohibition on entering into a "Variable Rate Transaction," as defined in the Purchase Agreement.

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

All 1,519,000 shares of our common stock being registered for resale hereunder which have been or may be issued or sold by us to Lincoln Park under the Purchase Agreement are expected to be freely tradable. It is anticipated that shares registered in this offering will be sold from time to time over a period of up to 36-months commencing on the date that the registration statement including this prospectus becomes effective. The sale by Lincoln Park of a significant amount of shares of our common stock registered in this offering at any given time could cause the market price of our common stock to decline and to be highly volatile. Sales of our common stock to Lincoln Park, if any, will depend upon market conditions and other factors to be determined by us. We may ultimately decide to sell to Lincoln Park all, some or none of the additional shares of our common stock that may be available for us to sell pursuant to the Purchase Agreement. If and when we do sell additional shares of our common stock to Lincoln Park, after Lincoln Park has acquired the shares of our common stock, Lincoln Park may resell all, some or none of those shares of our common stock at any time or from time to time in its discretion. Therefore, sales to Lincoln Park by us under the Purchase Agreement may result in substantial dilution to the interests of other holders of our common stock. In addition, if we sell a substantial number of shares of our common stock to Lincoln Park under the Purchase Agreement, or if investors expect that we will do

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so, the actual sales of shares of our common stock or the mere existence of our arrangement with Lincoln Park may make it more difficult for us to sell equity or equity-related securities in the future at a time and at a price that we might otherwise wish to effect such sales. However, we have the right to control the timing and amount of any additional sales of our common stock to Lincoln Park and the Purchase Agreement may be terminated by us at any time at our discretion without any cost to us.

Pursuant to the terms of the Purchase Agreement, from and after commencement, we have the right, but not the obligation, from time to time to direct Lincoln Park to purchase up to \$25.0 million of our common stock. Depending on the price per share at which we sell our common stock to Lincoln Park pursuant to the Purchase Agreement, we may need to sell to Lincoln Park under the Purchase Agreement more shares of our common stock than are being offered under this prospectus in order to receive aggregate gross proceeds equal to the \$25.0 million total commitment available to us under the Purchase Agreement. If we choose to do so, we must first register for resale under the Securities Act such additional shares of our common stock, which could cause additional substantial dilution to our stockholders. The number of shares of our common stock ultimately offered for resale by Lincoln Park under this prospectus is dependent upon the number of shares of our common stock we direct Lincoln Park to purchase under the Purchase Agreement.

The Purchase Agreement prohibits us from issuing or selling to Lincoln Park under the Purchase Agreement (i) shares of our common stock in excess of the Exchange Cap, unless we obtain stockholder approval to issue shares in excess of the Exchange Cap or the average price of all applicable sales of our common stock to Lincoln Park under the Purchase Agreement equals or exceeds \$3.1872 per share (which represents the lower of (A) the official closing price of our common stock on Nasdaq on the trading day immediately preceding the date of the Purchase Agreement and (B) the average official closing price of our common stock on Nasdaq for the five consecutive trading days ending on the trading day immediately preceding the date of the Purchase Agreement, plus an incremental amount of \$0.6272 attributable to the value of the Commitment shares), such that the transactions contemplated by the Purchase Agreement are exempt from the Exchange Cap limitation under applicable Nasdaq rules and (ii) any shares of our common stock if those shares, when aggregated with all other shares of our common stock then beneficially owned by Lincoln Park, would exceed the Beneficial Ownership Cap. Prior to entering into the Purchase Agreement with Lincoln Park, on June 16, 2020, we received stockholder approval pursuant to Nasdaq Listing Rules 5635(a), 5635(b) and 5635(d) to permit issuances of our common stock (including the issuance of more than 19.99% of our common stock) to Lincoln Park pursuant to the Purchase Agreement.

The following table sets forth the amount of gross proceeds we would receive from Lincoln Park from our sale of up to 1,338,299 shares of our common stock that we are registering hereby that we may issue and sell to Lincoln Park in the future under the Purchase Agreement at varying purchase prices from and after commencement:

<u>Assumed Average Purchase Price Per Share</u>	<u>Number of Registered Shares of our Common Stock to be Issued if Full Purchase<sup>(1)</sup></u>	<u>Percentage of Outstanding Shares of our Common Stock After Giving Effect to the Issuance to Lincoln Park<sup>(2)</sup></u>	<u>Gross Proceeds from the Sale of Shares of our Common Stock to Lincoln Park Under the Purchase Agreement<sup>(1)</sup></u>
\$1.00	1,338,299	21.88%	\$1,338,299
\$2.00	1,338,299	21.88%	\$2,676,598
\$2.36 <sup>(3)</sup>	1,338,299	21.88%	\$3,158,385
\$3.00	1,338,299	21.88%	\$4,014,897
\$4.00	1,338,299	21.88%	\$5,353,196

- (1) Although the Purchase Agreement provides that we may sell up to \$25.0 million of our common stock to Lincoln Park, we are only registering 1,519,000 shares of our common stock for resale under this prospectus, including 180,701 Commitment Shares issued to Lincoln Park as a commitment fee for making its irrevocable commitment to purchase our common stock under the Purchase Agreement, which may or may not cover all the shares of our common stock we ultimately sell to Lincoln Park under the Purchase Agreement, depending on the purchase price per share.

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- (2) The denominator is based on 4,779,584 shares of our common stock outstanding as of October 27, 2020 (including the 180,701 Commitment Shares), adjusted to include the number of shares of our common stock set forth in the adjacent column which we would have sold to Lincoln Park, assuming the purchase price in the adjacent column. The numerator is based on the number of shares of our common stock issuable under the Purchase Agreement at the corresponding assumed purchase price set forth in the adjacent column, giving effect to the Exchange Cap, but without giving effect to the Beneficial Ownership Cap, and excludes the Commitment Shares.
- (3) The closing sale price per share of our common stock on October 27, 2020.

### USE OF PROCEEDS

This prospectus relates to shares of our common stock that may be offered and sold from time to time by Lincoln Park. We will receive no proceeds from the sale of shares of common stock by Lincoln Park in this offering. We may receive up to \$25.0 million in gross proceeds under the Purchase Agreement from any sales we make to Lincoln Park pursuant to the Purchase Agreement after the date of this prospectus. We estimate that the net proceeds to us from the sale of our common stock to Lincoln Park pursuant to the Purchase Agreement would be up to \$25.0 million over an approximately 36-month period, assuming that we sell the full amount of our common stock that we have the right, but not the obligation, to sell to Lincoln Park under the Purchase Agreement, and after other estimated fees and expenses. See “Plan of Distribution” elsewhere in this prospectus for more information.

Any proceeds from the selling stockholder that we receive under the Purchase Agreement are expected to be used for working capital and general corporate purposes. As the remainder of the proceeds are intended to be used for working capital, research and development and operational expenses, some of such proceeds may be used from time to time to pay officer and director compensation. The amounts and timing of these expenditures will depend on a number of factors, such as the timing and progress of our research and development efforts, regulatory actions affecting our product candidates and our business, technological advances and the competitive environment for our product candidates. As we are unable to predict the timing or amount of potential issuances of all of the additional shares issuable to the Purchase Agreement, we cannot specify with certainty all of the particular uses for the net proceeds that we will have from the sale of such additional shares. Accordingly, our management will have broad discretion in the application of the net proceeds. We may also use a portion of the net proceeds to acquire or invest in complementary businesses, technologies, product candidates or other intellectual property, although we have no present commitments or agreements to do so. We may use the proceeds for purposes that are not contemplated at the time of this offering. Pending use of the net proceeds as described above, we expect to invest the net proceeds in short- and intermediate-term, interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government. It is possible that no additional shares will be issued under the Purchase Agreement.

## DILUTION

The sale of our common stock to Lincoln Park pursuant to the Purchase Agreement will have a dilutive impact on our stockholders. In addition, the lower our stock price is at the time we exercise our right to sell shares to Lincoln Park, the more shares of our common stock we will have to issue to Lincoln Park pursuant to the Purchase Agreement and our existing stockholders would experience greater dilution.

Our net tangible book value as of September 30, 2020 was \$2,249,000, or \$0.49 per share, based on 4,591,415 shares of our common stock outstanding as of that date. After giving effect to (i) the issuance of 180,701 shares of our common stock to Lincoln Park as Commitment Shares and (ii) the sale of 1,338,299 shares of our common stock to Lincoln Park pursuant to the Purchase Agreement at an assumed sale price of \$2.36 per share of our common stock (which represents the closing price of our common stock on October 27, 2020) and after deducting estimated offering expenses payable by us, our as-adjusted net tangible book value as of September 30, 2020 would have been approximately \$5.3 million, or \$0.86 per share. This represents an immediate increase in net tangible book value of \$0.37 per share to existing stockholders and an immediate dilution of \$1.50 per share to investors in this offering.

Unless otherwise noted, the number of shares of common stock to be outstanding immediately after this offering is based on 4,779,584 shares outstanding as of October 27, 2020 and excludes:

- 531,336 shares of common stock issuable upon exercise of stock options outstanding as of October 27, 2020 under our equity incentive plans, with a weighted-average exercise price of 10.01 per share;
- 210,389 shares of common stock reserved for future issuance under our 2015 New Employee Incentive Plan; and
- 159,939 shares of common stock reserved for future issuance under our 2020 Stock Incentive Plan;
- 3,113,625 shares of common stock issuable upon the exercise of warrants to purchase common stock outstanding as of October 27, 2020, with a weighted-average exercise price of \$2.62 per share.

To the extent that additional shares are issued pursuant to the foregoing, investors purchasing our common stock in this offering will experience further dilution. In addition, we may offer other securities in other offerings due to market conditions or strategic considerations. To the extent we issue such securities, investors may experience further dilution.

**SELLING STOCKHOLDER**

This prospectus relates to the possible resale by the selling stockholder, Lincoln Park, of shares of our common stock that have been or may be issued to Lincoln Park pursuant to the Purchase Agreement. We are filing the registration statement that includes this prospectus pursuant to the provisions of the Registration Rights Agreement, which we entered into with Lincoln Park on September 30, 2020, concurrently with our execution of the Purchase Agreement, in which we agreed to provide certain registration rights with respect to sales by Lincoln Park of the shares of our common stock that have been or may be issued to Lincoln Park under the Purchase Agreement.

Lincoln Park, as the selling stockholder, may, from time to time, offer and sell pursuant to this prospectus any or all of the shares of our common stock that we may issue to Lincoln Park from time to time at our discretion under the Purchase Agreement. The selling stockholder may sell some, all or none of its shares of our common stock. We do not know how long the selling stockholder will hold the shares of our common stock before selling them, and we currently have no agreements, arrangements or understandings with the selling stockholder regarding the sale of any of the shares of our common stock.

The following table presents information regarding the selling stockholder and the shares of our common stock that it may offer and sell from time to time under this prospectus. The table is prepared based on information supplied to us by the selling stockholder, and reflects its holdings as of October 27, 2020. Neither Lincoln Park nor any of its affiliates has held a position or office, or had any other material relationship, with us or any of our predecessors or affiliates. Beneficial ownership is determined in accordance with Section 13(d) of the Exchange Act and Rule 13d-3 thereunder. The percentage of shares of our common stock beneficially owned prior to the offering is based on 4,779,584 shares of our common stock outstanding as of October 27, 2020.

Name	Shares of our Common Stock Beneficially Owned Prior to Offering		Number of Shares of our Addition Common Stock Being Offered	Shares of our Common Stock Beneficially Owned After Offering <sup>(1)(5)</sup>	
	Number	%		Number	%
Lincoln Park Capital Fund, LLC <sup>(2)</sup>	180,701 <sup>(3)</sup>	3.78% <sup>(4)</sup>	1,338,299	1,519,000	24.83%

- (1) Assumes the sale of all shares of common stock registered pursuant to the registration statement that includes this prospectus, although the selling stockholder is under no obligation known to us to sell any shares of common stock at this time.
- (2) Josh Scheinfeld and Jonathan Cope, the Managing Members of Lincoln Park Capital, LLC, the manager of the selling stockholder, are deemed to be beneficial owners of all of the shares of our common stock owned by the selling stockholder. Messrs. Cope and Scheinfeld have shared voting and investment power over the shares of our common stock being offered under this prospectus. Neither Lincoln Park Capital, LLC, nor the selling stockholder, is a licensed broker-dealer or an affiliate of a licensed broker-dealer.
- (3) Represents the 180,701 Commitment Shares issued to Lincoln Park as a commitment fee for making its irrevocable commitment to purchase our common stock under the Purchase Agreement, all of which shares of our common stock are being registered under the Securities Act under the registration statement that includes this prospectus. In accordance with Rule 13d-3(d) under the Exchange Act, we have excluded from the number of shares of our common stock beneficially owned prior to the offering all of the shares of our common stock that we may issue and sell to Lincoln Park pursuant to the Purchase Agreement from and after commencement, because the issuance and sale of such shares of our common stock to Lincoln Park under the Purchase Agreement is solely at our discretion and is subject to certain conditions, the satisfaction of all of which are outside of Lincoln Park's control, including the registration statement of which this prospectus is a part becoming and remaining effective under the Securities Act. Furthermore, under the terms of the Purchase Agreement, issuances and sales of shares of our common stock to Lincoln Park under the Purchase Agreement are subject to certain limitations on the amounts we may sell to Lincoln Park at any

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time, including the Exchange Cap and the Beneficial Ownership Cap. See the description under the heading “The Lincoln Park Transaction” for more information about the Purchase Agreement.

- (4) Calculated by dividing (i) the total number of shares of our common stock beneficially owned by the selling stockholder on September 30, 2020, which pursuant to Rule 13d-3 under the Exchange Act (A) consists of the 180,701 Commitment Shares issued to Lincoln Park as a commitment fee for making the commitment under the Purchase Agreement and (B) excludes the 1,338,299 shares of our common stock that we may sell to Lincoln Park from time to time after commencement under the Purchase Agreement, by (ii) the number of shares of our common stock outstanding as of September 30, 2020, which includes the 180,701 Commitment Shares referred to in clause (i)(A) above.
- (5) Although the Purchase Agreement provides that we may sell up to \$25.0 million of our common stock to Lincoln Park, only 1,519,000 shares of our common stock are being offered under this prospectus which represents: (i) 180,701 Commitment Shares issued to Lincoln Park as a fee for making its irrevocable commitment to purchase our common stock under the Purchase Agreement, as a fee for its commitment to purchase shares of our common stock under the Purchase Agreement; and (ii) an aggregate of 1,519,000 shares that may be sold by us to Lincoln Park at our discretion from time to time over a 36-month period commencing after the satisfaction of certain conditions set forth in the Purchase Agreement, including that the SEC has declared effective the registration statement that includes this prospectus. Depending on the price per share at which we sell our common stock to Lincoln Park pursuant to the Purchase Agreement, we may need to sell to Lincoln Park under the Purchase Agreement more shares of our common stock than are offered under this prospectus in order to receive aggregate gross proceeds equal to the \$25.0 million total commitment available to us under the Purchase Agreement. If we choose to do so, we must first register for resale under the Securities Act such additional shares. The number of shares ultimately offered for resale by Lincoln Park is dependent upon the number of shares we sell to Lincoln Park under the Purchase Agreement.

## MARKET PRICE OF OUR COMMON STOCK AND RELATED STOCKHOLDER MATTERS

### Market Information

Our common stock is traded on the Nasdaq Capital Market under the symbol “PSTV.”

### Holders

As of October 27, 2020, there were approximately 15 registered holders of our common stock. This number does not include stockholders for whom shares were held in “nominee” or “street name.”

### Dividend Policy

We have never declared or paid any cash dividends on our common stock and we do not intend to pay cash dividends in the foreseeable future. We currently expect to retain any future earnings to fund the operation and expansion of our business.

## DESCRIPTION OF CAPITAL STOCK

*This section describes the general terms and provisions of the shares of our common stock, par value \$0.001 per share, and preferred stock, par value \$0.001 per share, and some of the provisions of our certificate of incorporation and bylaws and of the Delaware General Corporation Law, or DGCL. This description is only a summary. Our amended and restated certificate of incorporation, as amended, and our amended and restated bylaws have been filed as exhibits to our periodic reports filed with the SEC, which are incorporated by reference in this prospectus. 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, preferred stock or other securities. See “Where You Can Find More Information.”*

### Common Stock

We are authorized to issue 100,000,000 shares of common stock. As of October 27, 2020, there were 4,779,584 shares of common stock issued and outstanding. Each holder of common stock is entitled to one vote for each share of common stock held on all matters submitted to a vote of stockholders. We have not provided for cumulative voting for the election of directors in our amended and restated certificate of incorporation, as amended. This means that the holders of a majority of the shares voted can elect all of the directors then standing for election. Subject to preferences that may apply to shares of preferred stock outstanding at the time, the holders of outstanding shares of our common stock are entitled to receive dividends out of assets legally available at the times and in the amounts that our board of directors may determine from time to time. Upon our liquidation, dissolution or winding-up, the holders of common stock are entitled to share ratably in all assets remaining after payment of all liabilities and the liquidation preferences of any outstanding preferred stock. Holders of common stock have no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of common stock are fully paid and nonassessable.

### Preferred Stock

We are authorized to issue 5,000,000 shares of preferred stock, 1,954 shares of which were issued and outstanding as of October 27, 2020. Of this amount, (i) 13,500 shares have been designated Series A 3.6% Convertible Preferred Stock, 0 shares of which are outstanding, (ii) 10,000 shares have been designated Series B Convertible Preferred Stock, 1,016 shares of which are outstanding, and (iii) 7,000 shares have been designated Series C Convertible Preferred Stock, 938 shares of which are outstanding.

We may issue additional shares of preferred stock, in series, with such designations, powers, preferences and other rights and qualifications, limitations or restrictions as our board of directors may authorize, without further action by our stockholders, including:

- the distinctive designation of each series and the number of shares that will constitute the series;
- the voting rights, if any, of shares of the series and the terms and conditions of the voting rights;
- the dividend rate on the shares of the series, the dates on which dividends are payable, any restriction, limitation or condition upon the payment of dividends, whether dividends will be cumulative, and the dates from and after which dividends shall accumulate;
- the prices at which, and the terms and conditions on which, the shares of the series may be redeemed, if the shares are redeemable;
- the terms and conditions of a sinking or purchase fund for the purchase or redemption of shares of the series, if such a fund is provided;
- any preferential amount payable upon shares of the series in the event of the liquidation, dissolution or winding up of, or upon the distribution of any of our assets; and



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- the prices or rates of conversion or exchange at which, and the terms and conditions on which, the shares of the series may be converted or exchanged into other securities, if the shares are convertible or exchangeable.

The particular terms of any additional series of preferred stock, and the transfer agent and registrar for that series, will be described in a prospectus supplement. Any material United States federal income tax consequences and other special considerations with respect to any preferred stock offered under this prospectus will also be described in the applicable prospectus supplement.

The issuance of preferred stock could decrease the amount of earnings and assets available for distribution to holders of our common stock or adversely affect the rights and powers, including voting rights, of the holders of our common stock. The issuance of preferred stock could have the effect of delaying, deferring or preventing a change in control of our company, which could depress the market price of our common stock.

### **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, a holder 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 \$2.25. 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, a holder 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 for the Series C Preferred Stock 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.

### **Anti-Takeover Effects of Delaware Law and Our Certificate of Incorporation and Bylaws**

Certain provisions of Delaware law, our amended and restated certificate of incorporation, as amended, and our amended and restated bylaws could have the effect of delaying, deferring or discouraging another party from

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acquiring control of us. These provisions, which are summarized below, are expected to discourage certain types of coercive takeover practices and inadequate takeover bids. These provisions are also designed, in part, to encourage persons seeking to acquire control of us to first negotiate with our board of directors. We believe that the benefits of increased protection of our potential ability to negotiate with an unfriendly or unsolicited acquirer outweigh the disadvantages of discouraging such proposals, including proposals that are priced above the then-current market value of our common stock, because, among other reasons, the negotiation of such proposals could result in an improvement of their terms.

*Certificate of Incorporation and Bylaws.* Our amended and restated certificate of incorporation, as amended, and amended and restated bylaws include provisions that:

- authorize the board of directors to issue, without stockholder approval, blank-check preferred stock with such designations, powers, preferences and other rights and qualifications, limitations or restrictions as our board of directors may authorize, which preferred stock could decrease the amount of earnings and assets available for distribution to holders of our common stock or adversely affect the rights and powers, including voting rights, of the holders of our common stock;
- establish advance notice requirements for stockholder nominations of directors and for stockholder proposals that can be acted on at stockholder meetings;
- limit who may call stockholder meetings;
- require that any action to be taken by our stockholders be effected at a duly called annual or special meeting and not by written consent;
- provide that vacancies on our board of directors may be filled only by a majority of directors then in office, even if less than a quorum; and
- authorize us to indemnify officers and directors against losses that they may incur in investigations and legal proceedings resulting from their services to us, which may include services in connection with takeover defense measures.

*Delaware anti-takeover statute.* We are subject to the provisions of Section 203 of the DGCL regulating corporate takeovers. In general, Section 203 prohibits a publicly-held Delaware corporation from engaging, under certain circumstances, in a business combination with an interested stockholder for a period of three years following the date the person became an interested stockholder unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder; or
- upon completion of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the voting stock outstanding, but not the outstanding voting stock owned by the interested stockholder, (1) shares owned by persons who are directors and also officers and (2) shares owned by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- at or subsequent to the date of the transaction, the business combination is approved by the board of directors of the corporation and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66-2/3% of the outstanding voting stock which is not owned by the interested stockholder.

Generally, a “business combination” includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the “interested stockholder” and 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 outstanding voting stock.

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We expect the existence of this provision to have an anti-takeover effect with respect to transactions our board of directors does not approve in advance. We also anticipate that Section 203 may discourage business combinations or other attempts that might result in a premium over the market price for the shares of common stock held by our stockholders. The provisions of DGCL, our amended and restated certificate of incorporation, as amended, and our amended and restated bylaws could have the effect of discouraging others from attempting hostile takeovers and, as a consequence, they may also inhibit temporary fluctuations in the market price of our common stock that often result from actual or rumored hostile takeover attempts. These provisions may also have the effect of preventing changes in our management. It is possible that these provisions could make it more difficult to accomplish transactions that stockholders may otherwise deem to be in their best interests.

### **Transfer Agent and Registrar**

The transfer agent and registrar for our common stock and each class of preferred stock is Broadridge Corporate Issuer Solutions, Inc. The transfer agent's address is 1717 Arch Street, Suite 1300, Philadelphia, Pennsylvania 19103.

### **Listing**

Our common stock is listed on the Nasdaq Capital Market under the symbol "PSTV."

## PLAN OF DISTRIBUTION

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

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

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

Lincoln Park is an "underwriter" within the meaning of Section 2(a)(11) of the Securities Act.

Lincoln Park has informed us that it intends to use an unaffiliated broker-dealer to effectuate all sales, if any, of our common stock that it has acquired and may in the future acquire from us pursuant to the Purchase Agreement. Such sales will be made at prices and at terms then prevailing or at prices related to the then current market price. Each such unaffiliated broker-dealer will be an underwriter within the meaning of Section 2(a)(11) of the Securities Act. Lincoln Park has informed us that each such broker-dealer will receive commissions from Lincoln Park that will not exceed customary brokerage commissions.

Brokers, dealers, underwriters or agents participating in the distribution of the shares of our common stock offered by this prospectus may receive compensation in the form of commissions, discounts, or concessions from the purchasers, for whom the broker-dealers may act as agent, of shares of our common stock sold by Lincoln Park through this prospectus. The compensation paid to any such particular broker-dealer by any such purchasers of shares of our common stock sold by Lincoln Park may be less than or in excess of customary commissions. Neither we nor Lincoln Park can presently estimate the amount of compensation that any agent will receive from any purchasers of shares of our common stock sold by Lincoln Park.

We know of no existing arrangements between Lincoln Park or any other stockholder, broker, dealer, underwriter or agent relating to the sale or distribution of the shares of our common stock offered by this prospectus.

We may from time to time file with the SEC one or more supplements to this prospectus or amendments to the registration statement that includes this prospectus to amend, supplement or update information contained in this prospectus, including, if and when required under the Securities Act, to disclose certain information relating to a particular sale of shares of our common stock offered by this prospectus by the selling stockholder, including

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the names of any brokers, dealers, underwriters or agents participating in the distribution of such shares of our common stock by the selling stockholder, any compensation paid by Lincoln Park to any such brokers, dealers, underwriters or agents, and any other required information.

We will pay the expenses incident to the registration under the Securities Act of the offer and sale of the shares of our common stock included in this prospectus by Lincoln Park. We have agreed to indemnify Lincoln Park and certain other persons against certain liabilities in connection with the offering of shares of our common stock offered by this prospectus, including liabilities arising under the Securities Act or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities. Lincoln Park has agreed to indemnify us against liabilities under the Securities Act that may arise from certain written information furnished to us by Lincoln Park specifically for use in this prospectus or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities.

Lincoln Park has represented to us that at no time prior to the Purchase Agreement has Lincoln Park or its agents, representatives or affiliates engaged in or effected, in any manner whatsoever, directly or indirectly, any short sale (as such term is defined in Rule 200 of Regulation SHO of the Exchange Act) of our common stock or any hedging transaction, which establishes a net short position with respect to our common stock. Lincoln Park agreed that during the term of the Purchase Agreement, it, its agents, representatives or affiliates will not enter into or effect, directly or indirectly, any of the foregoing transactions.

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

This offering will terminate on the earlier of (i) termination of the Purchase Agreement or (ii) the date that all shares of our common stock offered by this prospectus have been sold by Lincoln Park.

Our common stock is currently listed on the Nasdaq Capital Market under the symbol "PSTV".

### **EXPERTS**

The consolidated financial statements as of December 31, 2019 and 2018 and for the years then ended incorporated by reference in this prospectus 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 an explanatory paragraph regarding the Company's ability to continue as a going concern), incorporated herein by reference, given on the authority of said firm as experts in auditing and accounting.

### **LEGAL MATTERS**

The validity of any securities offered by this prospectus will be passed upon for us by Pillsbury Winthrop Shaw Pittman LLP, Palo Alto, California.

### **WHERE YOU CAN FIND MORE INFORMATION**

We have filed a registration statement on Form S-1 with the SEC under the Securities Act. This prospectus is part of the registration statement but the registration statement includes and incorporates by reference

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additional information and exhibits. We file annual, quarterly and current reports, proxy statements and other information with the SEC. The SEC also 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](http://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 file 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](#) and [Form 10-K/A](#) for the year ended December 31, 2019 (filed with the SEC on March 30, 2020 and April 29, 2020, respectively);
- our Quarterly Reports on Form 10-Q for the quarters ended [March 31, 2020](#), [June 30, 2020](#), and [September 30, 2020](#) (filed with the SEC on May 14, 2020, August 10, 2020, and October 22, 2020, respectively);
- our Current Reports on Form 8-K filed with the SEC on [January 3, 2020](#), [February 6, 2020](#), [March 12, 2020](#), [March 30, 2020](#), [April 23, 2020](#), [June 11, 2020](#), [June 17, 2020](#), [August 4, 2020](#), [September 15, 2020](#), [October 5, 2020](#), [October 6, 2020](#), and [October 23, 2020](#) (to the extent filed and not furnished);
- the description of our common stock contained in our Registration Statement on [Form 10/A](#) filed on July 16, 2001, and any amendment or report filed with the Commission for the purpose of updating the description.

We are not, however, incorporating, in each case, any documents or information that we are deemed to furnish and not file in accordance with SEC rules.

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 oral or written requests by one of the following methods. Attention: Investor Relations, Plus Therapeutics, Inc., 4200 Marathon Blvd., Suite 200, Austin, TX 78756, (737) 255-7194. You may also access these documents, free of charge on the SEC's website at [www.sec.gov](http://www.sec.gov) or on the "Investors" page of our website at [www.plustherapeutics.com](http://www.plustherapeutics.com). The information found on our website, or that may be accessed by links on our website, is not part of this prospectus. We have included our website address solely as an inactive textual reference. Investors should not rely on any such information in deciding whether to purchase our common stock.

**DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES**

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



**1,519,000 Shares of Common Stock**



**PLUS THERAPEUTICS, INC.**

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**PROSPECTUS**

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, 2020

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**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 offering described in this registration statement. 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.

	<b>Amount to be Paid*</b>
SEC Registration Fee	\$ 400
Printing Expenses*	15,000
Legal Fees and Expenses*	75,000
Accounting Fees and Expenses*	25,000
Miscellaneous Expenses*	15,000
	<u>\$ 130,400</u>

\* Estimated solely for the purpose of this Item. Actual expenses may vary.

**Item 14. Indemnification of Directors and Officers.**

Section 102 of the Delaware General Corporation Law (the "DGCL") allows a corporation to eliminate the personal liability of directors of a corporation to the corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except where the director breached the duty of loyalty, failed to act in good faith, engaged in intentional misconduct or knowingly violated a law, authorized the payment of a dividend or approved a stock repurchase in violation of the DGCL or obtained an improper personal benefit.

Section 145 of the DGCL provides, among other things, that we may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding—other than an action by or in our right—by reason of the fact that the person is or was our director, officer, agent or employee, or is or was serving at our request as a director, officer, agent or employee of another corporation, partnership, joint venture, trust or other enterprise against expenses, including attorneys' fees, judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding. The power to indemnify applies (a) if such person is successful on the merits or otherwise in defense of any action, suit or proceeding, or (b) if such person acting in good faith and in a manner he or she reasonably believed to be in the best interest, or not opposed to the best interest, of us, and with respect to any criminal action or proceeding had no reasonable cause to believe his or her conduct was unlawful. The power to indemnify applies to actions brought by or in our right as well but only to the extent of defense expenses, including attorneys' fees but excluding amounts paid in settlement, actually and reasonably incurred and not to any satisfaction of judgment or settlement of the claim itself, and with the further limitation that in such actions no indemnification shall be made in the event of any adjudication of liability to us, unless the court believes that in light of all the circumstances indemnification should apply.

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

Our amended and restated certificate of incorporation, as amended, and amended and restated bylaws, filed as Exhibit 3.1 to our Annual Report on Form 10-K filed March 11, 2016 and Exhibit 3.2 to our Quarterly Report

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on Form 10-Q filed July 29, 2019, respectively, provide that we shall indemnify our directors, officers, employees and other agents to the fullest extent not prohibited by the DGCL or any other applicable law. In addition, we have entered into agreements to indemnify our directors and officers and expect to continue to enter into agreements to indemnify all of our directors and officers. These agreements require us, among other things, to indemnify our directors and officers against certain liabilities which may arise by reason of their status or service as directors or officers to the fullest extent not prohibited by law. These indemnification provisions and the indemnification agreements may be sufficiently broad to permit indemnification of our officers and directors for liabilities, including reimbursement of expenses incurred, arising under the Securities Act of 1933.

We maintain insurance policies under which our directors and executive officers are insured, within the limits and subject to the limitations of those policies, against certain expenses in connection with the defense of, and certain liabilities that might be imposed as a result of, actions, suits or proceedings to which they are parties by reason of being or having been directors or officers. The coverage provided by these policies may apply whether or not we would have the power to indemnify such person against such liability under the provisions of the General Corporation Law of the State of Delaware.

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

On September 30, 2020, we completed a private placement to Lincoln Park Capital Fund, LLC pursuant to which we have the right to sell to Lincoln Park up to \$25.0 million in shares of common stock, subject to certain limitations, from time to time over the 36-month period commencing on the date that a registration statement covering the resale of the shares is declared effective by the SEC. We issued 180,701 Commitment Shares to Lincoln Park as consideration for its commitment to purchase our shares under the Purchase Agreement. In the Purchase Agreement, Lincoln Park represented to the Company, among other things, that it was an “accredited investor” (as such term is defined in Rule 501(a) of Regulation D under the Securities Act of 1933, or the Securities Act). The securities were sold by the Company under the Purchase Agreement in reliance upon an exemption from the registration requirements under the Securities Act afforded by 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

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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 (a)(1)(i), (a)(1)(ii) and (a)(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 required to be filed pursuant to Rule 424(b)(2), (b)(5) or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. *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 effective date, 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 effective date.

(5) 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.

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

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**EXHIBIT INDEX  
PLUS THERAPEUTICS, INC.**

<b>Exhibit Number</b>	<b>Exhibit Title</b>	<b>Filed Herewith</b>	<b>Form</b>	<b>Incorporated by Reference File No.</b>	<b>Date Filed</b>
3.1	<a href="#">Composite Certificate of Incorporation.</a>		10-K	001-34375 Exhibit 3.1	03/11/2016
3.2	<a href="#">Certificate of Amendment to Amended and Restated Certificate of Incorporation.</a>		8-K	001-34375 Exhibit 3.1	05/10/2016
3.3	<a href="#">Certificate of Amendment to Amended and Restated Certificate of Incorporation.</a>		8-K	001-34375 Exhibit 3.1	05/23/2018
3.4	<a href="#">Certificate of Amendment to Amended and Restated Certificate of Incorporation.</a>		8-K	001-34375 Exhibit 3.1	07/29/2019
3.5	<a href="#">Certificate of Amendment to Amended and Restated Certificate of Incorporation.</a>		8-K	001-34375 Exhibit 3.1	08/06/2019
3.6	<a href="#">Certificate of Designation of Preferences, Rights and Limitations of Series A 3.6% Convertible Preferred Stock.</a>		8-K	001-34375 Exhibit 3.1	10/08/2014
3.7	<a href="#">Certificate of Designation of Preferences, Rights and Limitations of Series B Convertible Preferred Stock.</a>		8-K	001-34375 Exhibit 3.1	11/28/2017
3.8	<a href="#">Certificate of Designation of Preferences, Rights and Limitations of Series C Convertible Preferred Stock.</a>		8-K	001-34375 Exhibit 3.1	07/25/2018
3.9	<a href="#">Amended and Restated Bylaws of Plus Therapeutics, Inc.</a>		8-K	001-34375 Exhibit 3.2	07/29/2019
4.1	<a href="#">Form of Common Stock Certificate.</a>		10-K	001-34375 Exhibit 4.33	03/09/2018
4.2	<a href="#">Form of Series T Warrant.</a>		POS AM	333-224502 Exhibit 4.28	07/09/2018
4.3	<a href="#">Form of Series T Warrant Agreement between Plus Therapeutics, Inc. and Broadridge Corporation Issuer Solutions, Inc.</a>		POS AM	333-224502 Exhibit 4.36	07/09/2018
4.4	<a href="#">Form of Series U Warrant.</a>		S-1/A	333-229485 Exhibit 4.37	09/16/2019
4.5	<a href="#">Form of Warrant Amendment Agreement</a>		8-K	001-34375 Exhibit 4.1	04/23/2020
4.6	<a href="#">Form of Underwriters' Warrant Amendment Agreement</a>		8-K	001-34375 Exhibit 4.1	10/5/2020
5.1	<a href="#">Opinion of Pillsbury Winthrop Shaw Pittman LLP</a>	X			
10.1	<a href="#">Patent and Know-How License Agreement, dated March 29, 2020, by and between Plus Therapeutics, Inc. and NanoTx, Corp.</a>		8-K	001-34375 Exhibit 10.1	03/30/2020

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<b>Exhibit Number</b>	<b>Exhibit Title</b>	<b>Filed Herewith</b>	<b>Form</b>	<b>Incorporated by Reference File No.</b>	<b>Date Filed</b>
10.2	<a href="#"><u>Loan and Security Agreement, dated May 29, 2015, by and between Plus Therapeutics, Inc. and Oxford Finance, LLC.</u></a>		10-Q	001-34375 Exhibit 10.4	08/10/2015
10.3	<a href="#"><u>First Amendment to Loan and Security Agreement, dated September 20, 2017, by and between Plus Therapeutics, Inc. and Oxford Finance, LLC.</u></a>		S-1/A	333-219967 Exhibit 10.45	10/03/2017
10.4	<a href="#"><u>Second Amendment to Loan and Security Agreement, dated June 19, 2018, by and between Plus Therapeutics, Inc. and Oxford Finance, LLC.</u></a>		10-Q	001-34375 Exhibit 10.3	08/14/2018
10.5	<a href="#"><u>Third Amendment to Loan and Security Agreement, dated August 31, 2018, by and between Plus Therapeutics, Inc. and Oxford Finance, LLC.</u></a>		S-1	333-227485 Exhibit 10.51	09/21/2018
10.6	<a href="#"><u>Fourth Amendment to Loan and Security Agreement dated December 31, 2018, by and between Plus Therapeutics, Inc. and Oxford Finance, LLC.</u></a>		S-1	333-229485 Exhibit 10.52	02/01/2019
10.7	<a href="#"><u>Fifth Amendment to Loan and Security Agreement dated February 13, 2019, by and between Plus Therapeutics, Inc. and Oxford Finance, LLC.</u></a>		10-K	001-34375 Exhibit 10.55	03/29/2019
10.8	<a href="#"><u>Sixth Amendment to Loan and Security Agreement dated February 28, 2019, by and between Plus Therapeutics, Inc. and Oxford Finance, LLC.</u></a>		10-K	001-34375 Exhibit 10.56	03/29/2019
10.9	<a href="#"><u>Seventh Amendment to Loan and Security Agreement dated April 24, 2019, by and between Plus Therapeutics, Inc. and Oxford Finance, LLC.</u></a>		10-Q	001-34375 Exhibit 10.3	05/14/2019
10.10	<a href="#"><u>Eighth Amendment to Loan and Security Agreement dated July 15, 2019, by and between Plus Therapeutics, Inc. and Oxford Finance, LLC.</u></a>		10-Q	001-34375 Exhibit 10.2	08/15/2019
10.11	<a href="#"><u>Ninth Amendment to Loan and Security Agreement, dated March 29, 2020 by and between Plus Therapeutics, Inc. and Oxford Finance, LLC.</u></a>		8-K	001-34375 Exhibit 10.2	03/30/2020
10.12#	<a href="#"><u>Amended and Restated and Restated Employment Agreement between Marc Hedrick and Plus Therapeutics, Inc.</u></a>		10-Q	001-34375 Exhibit 10.6	05/14/2020
10.13#	<a href="#"><u>Amended and Restated and Restated Employment Agreement between Andrew Sims and Plus Therapeutics, Inc.</u></a>		10-Q	001-34375 Exhibit 10.7	05/14/2020

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<b>Exhibit Number</b>	<b>Exhibit Title</b>	<b>Filed Herewith</b>	<b>Form</b>	<b>Incorporated by Reference File No.</b>	<b>Date Filed</b>
10.14#	<a href="#">Plus Therapeutics, Inc. 2020 Stock Incentive Plan.</a>		S-8	333-239548 Exhibit 99.1	06/30/2020
10.15#	<a href="#">2015 New Employee Incentive Plan.</a>		8-K	001-34375 Exhibit 10.1	01/05/2016
10.16#	<a href="#">First Amendment to the Plus Therapeutics, Inc. 2015 New Employee Incentive Plan, dated Jan. 26, 2017</a>		10-K	001-34375 Exhibit 10.42	03/24/2017
10.17#	<a href="#">Second Amendment to the Plus Therapeutics, Inc. 2015 New Employee Incentive Plan, dated February 6, 2020.</a>		10-K	001-34375 Exhibit 10.25	03/30/2020
10.18#	<a href="#">Form of Notice of Grant of Stock Option under the 2015 New Employee Incentive Plan.</a>		S-8	333-210211 Exhibit 99.5	03/15/2016
10.19#	<a href="#">Form of Stock Option Agreement under the 2015 New Employee Incentive Plan.</a>		S-8	333-210211 Exhibit 99.4	03/15/2016
10.20#	<a href="#">Form of Indemnification Agreement</a>		8-K	001-34375 Exhibit 10.1	02/06/2020
10.21#	<a href="#">Form of Agreement for Acceleration and/or Severance.</a>		10-K	001-34375 Exhibit 10.113	03/11/2016
10.22	<a href="#">Purchase Agreement, dated September 30, 2020, by and between Plus Therapeutics, Inc. and Lincoln Park Capital Fund, LLC</a>		8-K	001-34375 Exhibit 10.1	10/6/2020
10.23	<a href="#">Registration Rights Agreement, dated September 30, 2020, by and between Plus Therapeutics, Inc. and Lincoln Park Capital Fund, LLC</a>		8-K	001-34375 Exhibit 10.2	10/6/2020
23.1	<a href="#">Consent of BDO USA, LLP, Independent Registered Public Accounting Firm.</a>	X			
23.2	<a href="#">Consent of Pillsbury Winthrop Shaw Pittman LLP</a>	Included in Exhibit 5.1			
24.1	<a href="#">Power of Attorney.</a>	Included on signature page			

# Indicates management contract or compensatory plan or arrangement.



## 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 October 29, 2020.

### PLUS THERAPEUTICS, INC.

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

## POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Marc H. Hedrick, MD and Andrew Sims, and each of them, his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments, including post-effective amendments, to this Registration Statement, and any registration statement relating to the offering covered by this Registration Statement and filed pursuant to Rule 462(b) under the Securities Act of 1933, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully for all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that each of said attorneys in fact and agents or their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

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

<u>Name</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Marc H. Hedrick, MD</u> Marc H. Hedrick, MD	President and Chief Executive Officer and Director <i>(Principal Executive Officer)</i>	October 29, 2020
<u>/s/ Andrew Sims</u> Andrew Sims	Chief Financial Officer <i>(Principal Financial Officer and Principal Accounting Officer)</i>	October 29, 2020
<u>/s/ Richard J. Hawkins</u> Richard J. Hawkins	Chairman of the Board	October 29, 2020
<u>/s/ Howard Clowes</u> Howard Clowes	Director	October 29, 2020
<u>/s/ An van Es-Johansson, MD</u> An van Es-Johansson, MD	Director	October 29, 2020
<u>/s/ Robert Lenk, Ph.D.</u> Robert Lenk, Ph.D.	Director	October 29, 2020
<u>/s/ Greg Petersen</u> Greg Petersen	Director	October 29, 2020

PILLSBURY WINTHROP SHAW PITTMAN LLP  
2550 Hanover Street  
Palo Alto, California 94304

October 29, 2020

Plus Therapeutics, Inc.  
4200 Marathon Blvd., Suite 200  
Austin, TX 78756

Re: Registration Statement on Form S-1

Ladies and Gentlemen:

We are acting as counsel for Plus Therapeutics, Inc., a Delaware corporation (the "Company"), in connection with the Registration Statement on Form S-1 (the "Registration Statement") filed by the Company with the Securities and Exchange Commission (the "Commission") for purposes of registering under the Securities Act of 1933 (the "Act") the resale of 1,519,000 shares of the Company's common stock, par value \$0.001 per share, of which (i) 180,701 shares (the "Commitment Shares") have been issued to Lincoln Park Capital Fund, LLC ("Lincoln Park") and (ii) 1,338,299 shares (the "Purchase Shares" and together with the Commitment Shares, the "Shares") are reserved for issuance pursuant to a purchase agreement between the Company and Lincoln Park, dated as of September 30, 2020 (the "Purchase Agreement").

We have reviewed and are familiar with such corporate proceedings and other matters as we have considered relevant or necessary for the opinions expressed in this letter. Based on the foregoing and the assumption that no Purchase Shares will be sold at a price which is less than the Floor Price (as defined in the Purchase Agreement), we are of the opinion that: (i) the Commitment Shares are duly authorized and validly issued and are fully paid and non-assessable; and (ii) the Purchase Shares have been duly authorized and, when issued and delivered by the Company in the manner described in the Registration Statement and the Prospectus and in accordance with the resolutions adopted by the Board of Directors of the Company, will be validly issued, fully paid and non-assessable.

We hereby consent to the filing of this opinion letter as Exhibit 5.1 to the Registration Statement and to the use of our name under the caption "Legal Matters" in the Registration Statement and in the Prospectus included therein. In giving this consent, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission promulgated thereunder.

Very truly yours,

/s/ Pillsbury Winthrop Shaw Pittman LLP

Consent of Independent Registered Public Accounting Firm

Plus Therapeutics, Inc.  
Austin, TX 78756 USA

We hereby consent to the incorporation by reference in the Prospectus constituting a part of this Registration Statement of our report dated March 30, 2020, relating to the consolidated financial statements of Plus Therapeutics, Inc. (the "Company") appearing in the Company's Annual Report on Form 10-K for the year ended December 31, 2019. Our report contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

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

/s/ BDO USA, LLP

San Diego, California  
October 29, 2020