

3,727,387 Shares

Common Stock

This prospectus relates to the offer and sale of up to 3,727,387 shares of common stock, par value \$0.001, of Cytori Therapeutics, Inc., a Delaware corporation, by Lincoln Park Capital Fund, LLC, or Lincoln Park or the selling stockholder.

The shares of common stock being offered by the selling stockholder have been or may be issued pursuant to the purchase agreement dated September 21, 2018 that we entered into with Lincoln Park. See "The Lincoln Park Transaction" for a description of that agreement and "Selling Stockholder" for additional information regarding Lincoln Park. The prices at which Lincoln Park may sell the shares will be determined by the prevailing market price for the shares or in negotiated transactions.

We are not selling any securities under this prospectus and will not receive any of the proceeds from the sale of shares by the selling stockholder.

The selling stockholder may sell or otherwise dispose of the shares of 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 shares of 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.

The selling stockholder will pay all brokerage fees and commissions and similar expenses. We will pay the expenses (except brokerage fees and commissions and similar expenses) incurred in registering the shares, including legal and accounting fees. See "Plan of Distribution".

Our common stock is currently quoted on The Nasdaq Capital Market under the symbol "CYTX". On October 4, 2018, the last reported sale price of our common stock on The Nasdaq Capital Market was \$0.44.

Investing in our common stock involves a high degree of risk. You should review carefully the risks and uncertainties described under the heading "Risk Factors" beginning on page 6 of this prospectus, and under similar headings in any amendments or supplements to this prospectus.

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

The date of this prospectus is October 5, 2018.

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ABOUT THIS PROSPECTUS

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

You should rely only on the information 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 "Cytori," "the Company," "we," "us" and "our" refer to Cytori Therapeutics, Inc. and our subsidiaries. Solely for convenience, trademarks and tradenames referred to in this prospectus may appear without the @ or TM symbols, but such references are not intended to indicate in any way that we will not assert, to the fullest extent under applicable law, our rights, or that the applicable owner will not assert its rights, to these trademarks and tradenames.

Unless the context otherwise requires, references in this prospectus to shares of our common stock, including prices per share of our common stock, reflect the one-for-ten reverse stock split that was approved by our stockholders and board of directors on May 18, 2018. Our common stock commenced trading on a split-adjusted basis on May 24, 2018.

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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 information incorporated by reference herein.

Our Business

Our objective is to build a profitable and growing specialty therapeutics company. To meet this objective, we have acquired and are developing two technology platforms that hold promise for treating millions of patients and represent significant potential for increasing stockholder value. Our current corporate activities fall substantially into advancing these platforms: Cytori Nanomedicine and Cytori Cell Therapy.

The Cytori Nanomedicine platform features a versatile liposomal nanoparticle technology for drug encapsulation that has thus far provided the foundation to bring two promising drugs into mid/late stage clinical trials. Nanoparticle encapsulation is promising because it can help improve the delivery and metabolism of many drugs, thus potentially enhancing the therapeutic profile and patient benefits. Our lead drug candidate, ATI-0918 is a generic version of pegylated liposomal encapsulated doxorubicin. Pegylated liposomal encapsulated doxorubicin is a heavily relied upon chemotherapeutic used in many cancer types on a global basis. We believe that data from a 60-patient European study of ATI-0918 has met the statistical criteria for bioequivalence to Janssen's Caelyx®, the current reference listed drug in Europe. We intend that these bioequivalence data will serve as a basis for our planned regulatory submission to the European Medicines Agency, or EMA, for ATI-0918. We are currently evaluating our strategic options to bring ATI-0918 to the U.S., China, and other markets. Our second nanomedicine drug candidate is ATI-1123, a novel and new chemical entity which is a nanoparticle-encapsulated form of docetaxel, also a workhorse chemotherapeutic drug used for many cancers. A Phase I clinical trial of ATI-1123 has been completed and published, and we are investigating possible expansion of this trial to Phase II, most likely in conjunction with a development partner. Finally, in connection with our acquisition of the ATI-0918 and ATI-1123 drug candidates, we have acquired know-how (including proprietary processes and techniques) and a scalable nanoparticle manufacturing plant in San Antonio, Texas from which we intend to manufacture commercial quantities of our nanoparticle drugs.

Cytori Cell Therapy, or CCT, is based on the scientific discovery that the human adipose or fat tissue compartment is a source of a unique mixed population of stem, progenitor and regenerative cells that may hold substantial promise in the treatment of numerous diseases and conditions. To bring this promise to health providers and their patients, we have developed certain novel therapies prepared and administered at the patient's bedside with proprietary technologies that include therapy-specific reusable, automated, standardized Celution devices, single-use Celution consumable sets, Celase reagent, and Intravase reagent. Our CCT lead product candidate, HabeoTM Cell Therapy, was evaluated in a Cytori-sponsored U.S. randomized, placebo-controlled, doubleblind, multi-center clinical trial, STAR (Scleroderma Treatment with Celution Processed Adipose Derived Regenerative Cells), for the treatment of impaired hand function in patients with scleroderma. The STAR trial enrolled and evaluated 88 patients with scleroderma, including 51 patients within the diffuse cutaneous subset and 37 with limited cutaneous scleroderma. On July 24, 2017, we announced top-line, preliminary data and presented the full data analysis on October 18, 2017. Further, we recently received feedback from a FDA pre-submission meeting, indicating that a clinical trial focused on more severely affected diffuse systemic sclerosis patients could be an appropriate next step given the results of the STAR clinical trial. We finalized meeting minutes and we are considering additional dialogue with the FDA to clarify the parameters and key aspects of a potential follow-on clinical trial of Habeo. At this time, we do not have, and are not prepared to commit, the financial and other resources required in order to conduct an additional clinical trial of Habeo and will instead look to partnering or out-licensing opportunities as a basis for any continued development. In addition, on January 22, 2018, we announced the investigator-initiated and Cytori-supported SCLERADEC-II clinical trial in France using Habeo Cell Therapy completed its enrollment and data is anticipated in the second half of 2018. Additional CCT treatments are in various stages of development in the areas of urology, wounds, and orthopedics. Further, our CCT platform is the subject of investigator-initiated trials conducted by our partners, licensees and other third parties, some of which are supported by us and/or funded by government agencies and other funding sources, detailed in an announcement on November 13, 2017. Currently, we



internally manufacture the Celution devices and consumables in the United States and the United Kingdom and source our Celase and Intravase reagents from a third-party supplier. We are exploring contract manufacturing organization options for the Celution System to reduce overhead and product costs of goods sold. We also have obtained regulatory approval to sell some of our CCT products, including our Celution devices and consumables and associated reagents, in certain markets outside the U.S. In those markets, we have been able to further develop and improve our core technologies, gain expanded clinical and product experience and data, and generate sales.

THE OFFERING

On September 21, 2018, we entered into a purchase agreement with Lincoln Park, which we refer to in this prospectus as the Purchase Agreement, pursuant to which Lincoln Park has agreed to purchase from us up to an aggregate of \$5,000,000 of our common stock (subject to certain limitations) from time to time over the term of the Purchase Agreement. Also on September 21, 2018, 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 have filed with 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 common stock that have been or may be issued to Lincoln Park 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, all of which are outside of Lincoln Park's control, have been satisfied, including that the SEC has declared effective the registration statement that includes this prospectus, which we refer to in this prospectus as the Commencement. Lincoln Park has committed to purchase 380,000 shares on the date of the Commencement which purchase we refer to in this prospectus as the "initial purchase". Thereafter, we may, from time to time and at our sole discretion, on any single business day, direct Lincoln Park to purchase shares of our common stock in amounts up to 250,000 shares, which amounts may be increased to up to 375,000 shares depending on the market price of our common stock at the time of sale and subject to a maximum commitment by Lincoln Park of \$1,000,000 per single purchase, which we refer to in this prospectus as "regular purchases", plus 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 that may be sold to Lincoln Park in the initial purchase and regular purchases under the Purchase Agreement will be based on the market price of our common stock preceding the time of sale as computed under the Purchase Agreement. The purchase price per share will be equitably adjusted for any reorganization, recapitalization, non-cash dividend, stock split, or other similar transaction occurring during the business days used to compute such price. We may at any time in our sole discretion terminate the Purchase Agreement without fee, penalty or cost upon one business day notice. For entering into this commitment, we paid Lincoln Park a \$100,000 cash fee. 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 15, 2018, there were 11,192,666 shares of our common stock outstanding, of which 11,182,163 shares were held by nonaffiliates. Although the Purchase Agreement provides that we may sell up to \$5,000,000 of our common stock to Lincoln Park, only 3,727,387 shares of our common stock are being offered under this prospectus, which represents shares which may be issued to Lincoln Park in the future under the Purchase Agreement, if and when we sell shares 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 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 \$5,000,000 total commitment available to us under the Purchase Agreement. If all of the 3,727,387 shares offered by Lincoln Park under this prospectus were issued and outstanding as of the date hereof, such shares would represent approximately 24.98% of the total number of shares of our common stock outstanding and approximately 25.00% of the total number of outstanding shares held by non-affiliates, in each case as of the date hereof. If we elect to issue and sell more than the 3,727,387 shares offered under this prospectus to Lincoln Park, 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, which could cause additional substantial dilution to our stockholders. 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.

Under applicable rules of The Nasdaq Capital Market, in no event may we issue or sell to Lincoln Park under the Purchase Agreement more than 19.99% of the shares of our common stock outstanding immediately prior to the execution of the Purchase Agreement (which is 2,238,533 shares based on 11,192,666 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 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 \$0.434 (which represents the closing consolidated bid price of our common stock on September 20, 2018), such that issuances and sales of our common stock to Lincoln Park under the Purchase Agreement 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 Nasdaq rules.

The Purchase Agreement also prohibits us from directing Lincoln Park to purchase any shares of common stock if those shares, when aggregated with all other shares of our common stock then beneficially owned by Lincoln Park and its affiliates, would result in Lincoln Park and its affiliates 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 in this offering 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 common stock that our existing stockholders own will not decrease, the shares owned by our existing stockholders will represent a smaller percentage of our total outstanding shares after any such issuance to Lincoln Park.

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Summary of the Offering

Common stock to be offered by the selling stockholder:	3,727,387 shares consisting of shares we may sell to Lincoln Park under the Purchase Agreement from time to time.
Common stock outstanding prior to this offering	11,192,666 shares
Common stock to be outstanding after giving effect to the issuance of 3,727,387 shares under the Purchase Agreement registered hereunder	14,920,053 shares
Use of Proceeds	We will receive no proceeds from the sale of shares of common stock by Lincoln Park in this offering. We may receive up to \$5,000,000 aggregate gross proceeds under the Purchase Agreement from any sales we make to Lincoln Park pursuant to the Purchase Agreement. Any proceeds that we receive from sales to Lincoln Park under the Purchase Agreement will be used for working capital and general corporate purposes. See "Use of Proceeds."
Risk factors	This investment involves a high degree of risk. See "Risk Factors" for a discussion of factors you should consider carefully before making an investment decision.
Symbol on The Nasdaq Capital Market	"CYTX"

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 our Quarterly Reports on Form 10-Q filed with the SEC and incorporated by reference into this prospectus. These risk factors relate to our business, intellectual property, regulatory matters, and ownership of our common stock. In addition, the following risk factors present material risks and uncertainties associated with 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, 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 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 21, 2018, we entered into the Purchase Agreement with Lincoln Park, pursuant to which Lincoln Park has committed to purchase up to \$5,000,000 of our common stock. Upon the execution of 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 24-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. 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.

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, some or none 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 and without it we may not be able to continue operations.

At June 30, 2018 we had a working capital deficit of \$10.3 million. The independent auditor's report for the year ended December 31, 2017, includes an explanatory paragraph to their audit opinion stating that our recurring losses from operations raise substantial doubt about our ability to continue as a going concern. We do not currently have sufficient financial resources to fund our operations or those of our subsidiaries. Therefore, we need additional funds to continue these operations.

We may direct Lincoln Park to purchase up to \$5,000,000 worth of shares of our common stock under our agreement over a 24-month period generally in amounts up to 250,000 shares of our common stock, which may be increased to up to 375,000 shares of our common stock depending on the market price of our common stock at the time of sale and subject to a maximum limit of \$1,000,000 per purchase, on any such business day. Assuming a

purchase price of \$0.44 per share (the closing sale price of the common stock on October 4, 2018) and the purchase by Lincoln Park of 3,727,387 shares of common stock, proceeds to us would only be \$1.4 million.

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 \$5,000,000 under the Purchase Agreement to Lincoln Park, we may still need additional capital to fully implement our business, operating and development plans. 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.

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

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

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

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

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

On August 28, 2018, we received a written notice from Nasdaq staff indicating that, based upon the closing bid price of our common stock for the last 30 consecutive business days, we no longer met the requirement to maintain a minimum bid price of 1 per share, as set forth in Nasdaq Listing Rule 5550(a)(2). In accordance with Nasdaq Listing Rule 5810(c)(3)(A), we were provided a period of 180 calendar days, or until February 25, 2019, in which to regain compliance. However, we may be unable to regain compliance with our current minimum bid price obligation or other listing requirements, which could cause us to lose eligibility for continued listing on the Nasdaq Capital Market or any comparable trading market.

If we cease to be eligible to trade on Nasdaq:

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

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

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

- fluctuations in our operating results or the operating results of our competitors;
- the outcome of clinical trials involving the use of our products, including our sponsored trials;
- · changes in estimates of our financial results or recommendations by securities analysts;
- · variance in our financial performance from the expectations of securities analysts;
- · changes in the estimates of the future size and growth rate of our markets;
- · changes in accounting principles or changes in interpretations of existing principles, which could affect our financial results;
- conditions and trends in the markets we currently serve or which we intend to target with our product candidates;
- changes in general economic, industry and market conditions;
- success of competitive products and services;
- · changes in market valuations or earnings of our competitors;
- · announcements of significant new products, contracts, acquisitions or strategic alliances by us or our competitors;
- our continuing ability to list our securities on an established market or exchange;
- the timing and outcome of regulatory reviews and approvals of our products;
- the commencement or outcome of litigation involving our company, our general industry or both;
- · changes in our capital structure, such as future issuances of securities or the incurrence of additional debt;
- · actual or expected sales of our common stock by the holders of our common stock; and
- the trading volume of our common stock.

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

The market price of our common stock may decline after you purchase shares in this offering. Moreover, following your purchase you may not be able to sell your common stock at a price equal to or greater than the price you paid for such shares of common stock.

We may be or become the target of securities litigation, which is costly and time-consuming to defend.

In the past, following periods of market volatility in the price of a company's securities, the reporting of unfavorable news or continued decline in a company's stock price, security holders have often instituted class action litigation. The market value of our securities has steadily declined over the past several years for a variety of reasons, including the announcement of the results of our STAR clinical trial in July 2017, and for other reasons discussed elsewhere in this "Risk Factors" section, which heightens our litigation risk. If we face such litigation, we could incur substantial legal costs and our management's attention could be diverted from the operation of our business, causing our business to suffer. Any adverse determination in any such litigation or any amounts paid to settle any such actual or threatened litigation could require that we make significant payments.

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

As of September 15, 2018, we had 11,192,666 shares of our common stock outstanding. Sales of shares of common stock in the public market, including pursuant to our ATM program, or the expectation of such sales, could cause the market price of our common stock to decline. We may also sell additional common stock or securities convertible into or exercisable or exchangeable for common stock in subsequent public or private offerings or other transactions, which may adversely affect the market price of our common stock.

We have granted demand registration rights for the resale of certain shares of our common stock to each of Astellas Pharma Inc. and Green Hospital Supply, Inc. pursuant to common stock purchase agreements previously entered into with each of these stockholders. An aggregate of approximately 300,000 shares of our common stock are subject to these demand registration rights. If we receive a written request from any of these stockholders to file a registration statement under the Securities Act, covering its shares of unregistered common stock, we are required to use reasonable efforts to prepare and file with the SEC within 30 business days of such request a registration statement covering the resale of the shares for an offering to be made on a continuous basis pursuant to Rule 415 under the Securities Act.

We have also granted registration rights to Azaya Therapeutics, Inc., or Azaya, with respect to the 117,325 shares of our common stock that we issued in the name of Azaya at the closing of our acquisition of the Cytori Nanomedicine assets. Under the terms of our asset purchase agreement with Azaya, we filed a registration statement with the SEC covering these shares, which was declared effective by the SEC. Any sales by Azaya could put pressure on our stock and depress our share price.

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

Our charter allows us to issue up to 100,000,000 shares of our common stock and to issue and designate the rights of, without stockholder approval, up to 5,000,000 shares of preferred stock. To raise additional capital, we may in the future sell additional shares of our common stock or other securities convertible into or exchangeable for our common stock at prices that are lower than the prices paid by existing stockholders, and investors purchasing

shares or other securities in the future could have rights superior to existing stockholders, which could result in substantial dilution to the interests of existing stockholders.

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

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

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

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

FORWARD-LOOKING STATEMENTS

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

All statements, other than statements of historical fact, included or incorporated herein regarding our strategy, future operations, financial position, future revenues, projected costs, plans, prospects and objectives are forward-looking statements. Words such as "expect," "anticipate," "intend," "plan," "believe," "seek," "estimate," "think," "may," "could," "will," "would," "should," "continue," "potential," "likely," "opportunity" and similar expressions or variations of such words are intended to identify forward-looking statements, but are not the exclusive means of identifying forward-looking statements. Additionally, forward-looking statements include statements concerning future matters such as our anticipated expenditures, including those related to preclinical and clinical trials and research studies and general and administrative expenses, the potential size of the markets for our products, future development and/or expansion of our products and therapies in our markets, our ability to generate product revenues or effectively manage our gross profit margins, our ability to obtain regulatory clearances, our ability to commercialize our novel cell therapy platform products and our nanomedicine platform, expectations as to our future performance, liquidity and capital resources, including our potential need for additional financing and the availability thereof as well as our ability to continue to service our existing debt, and the potential enhancement of our cash position and stock price through development, marketing, and licensing arrangements. Such statements are based on currently available operating, financial and competitive information and are subject to various risks, uncertainties and assumptions that could cause actual results to differ materially from those anticipated or implied in our forward-looking statements due to a number of factors including, but not limited to, our need and ability to raise additional cash, our joint ventures, risks associated with laws or regulatory requirements applicable to us, the impact of changes in the tax code as a result of recent federal tax legislation and uncertainty as to how some of those changes may be applied, market conditions, product performance, potential litigation, competition within the regenerative medicine field, and other factors set forth above under the section entitled "Risk Factors" in this prospectus and any accompanying prospectus supplement. Given these risks, uncertainties and other factors, many of which are beyond our control, you should not place undue reliance on these forward-looking statements.

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

THE LINCOLN PARK TRANSACTION

General

On September 21, 2018, we entered into the Purchase Agreement and the Registration Rights Agreement with Lincoln Park. Pursuant to the terms of the Purchase Agreement, Lincoln Park has agreed to purchase from us up to \$5,000,000 of our common stock (subject to certain limitations) from time to time during the term of the Purchase Agreement. Pursuant to the terms of the Registration Rights Agreement, we have filed with the SEC the registration statement that includes this prospectus to register for resale under the Securities Act the shares that have been or may be issued to Lincoln Park under the Purchase Agreement. At the time we executed the Purchase Agreement and the Registration Rights Agreement, we paid Lincoln Park \$100,000 as consideration for its commitment to purchase shares of our common stock under the Purchase Agreement.

We do not have the right to commence any sales to Lincoln Park under the Purchase Agreement until the Commencement has occurred, which is the time at which all of the conditions set forth in the Purchase Agreement, all of which are outside of Lincoln Park's control, have been satisfied, including the registration statement that includes this prospectus being declared effective by the SEC. Lincoln Park has committed to purchase 380,000 shares on the date of the Commencement the initial purchase. Thereafter, we may, from time to time and at our sole discretion, direct Lincoln Park to purchase shares of our common stock in regular purchases in amounts up to 250,000 shares which amounts may be increased to up to 375,000 shares depending on the market price of our common stock at the time of sale and subject to a maximum commitment by Lincoln Park of \$1,000,000 per singular regular purchase. The purchase price per share sold in the initial purchase and regular purchases will be based on the market price of our common stock immediately preceding the time of sale as computed under the Purchase Agreement. Lincoln Park may not assign or transfer its rights and obligations under the Purchase Agreement.

Under applicable rules of The Nasdaq Capital Market, in no event may we issue or sell to Lincoln Park under the Purchase Agreement share of our common stock in excess of the Exchange Cap (which is 2,238,533 shares, or 19.99% of the shares of our common stock outstanding immediately prior to the execution of the Purchase Agreement), unless (i) we obtain stockholder approval to issue shares of 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 \$0.434 (which represents the closing consolidated bid price of our common stock on September 20, 2018), such that issuances and sales of our common stock to Lincoln Park under the Purchase Agreement 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 Nasdaq rules.

The Purchase Agreement also prohibits us from directing Lincoln Park to purchase any shares of common stock if those shares, when aggregated with all other shares of our common stock then beneficially owned by Lincoln Park and its affiliates, would result in Lincoln Park exceeding the Beneficial Ownership Cap.

Purchase of Shares Under the Purchase Agreement

Under the Purchase Agreement, on the date of the Commencement, Lincoln Park will purchase 380,000 at a purchase price of the lesser of (i) the closing price the day prior to effectiveness or (ii) the arithmetic average closing price of our common stock for the 10 consecutive business days prior to effectiveness. Thereafter, we may direct Lincoln Park to purchase up to 250,000 shares of our common stock in a regular purchase on such business day, which is referred to as a Regular Purchase in this prospectus, provided, however, that (i) the Regular Purchase may be increased to up to 275,000 shares, provided that the closing sale price of our common stock is not below \$0.750 on the purchase date (subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction as provided in the Purchase date (subject to adjustment for any reorganization, recapitalization, recapitalization, non-cash dividend, stock split, reverse stock split, reverse stock split or other similar transaction as provided in the Purchase date (subject to adjustment for any reorganization, recapitalization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction as provided in the Purchase date (subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction as provided in the Purchase date (subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction as provided in the Purchase date (subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction as provided in the Purchase Agreement) and (iii) the Regular Purchase may be increased to up to 375,000 shares, provided that the closing sale price of our common stock is not below split.

stock is not below \$1.50 on the purchase date (subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction as provided in the Purchase Agreement) (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 \$1,000,000. 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 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 of such shares; or
- 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.

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 and the closing sale price of our common stock on such business day is not below \$0.25 per share (subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction as provided in the Purchase Agreement), 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 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
- three times 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 the lower of:

- 95% of the volume weighted average price of our common stock during the applicable 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 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, and provided that the closing price of our common stock on the business day immediately preceding such business day is not less than \$0.25 per share (subject to adjustment for any reorganization, recapitalization, non-cash dividend, stock split, reverse stock split or other similar transaction as provided in the Purchase Agreement), 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 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 Agreement, which period of time we refer to as the Additional Accelerated Purchase
 Measurement Period; and
- three times 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 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 the lower of:

- 95% 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 the Initial Purchase, 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.

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 Global Market, the Nasdaq Global Select Market, the NYSE American, the OTC Bulletin Board or OTC Markets (or nationally recognized successor thereto);
- 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;



- 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;
- if at any time the Exchange Cap is reached, to the extent applicable;
- any voluntary or involuntary participation or threatened participation in insolvency or bankruptcy proceedings by or against us; or
- if at any time we are not eligible to transfer our common stock electronically.

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 3,727,387 shares registered in this offering 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 over a period of up to 24-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 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 shares to Lincoln Park, after Lincoln Park has acquired the shares, Lincoln Park may resell all, some or none of those shares 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 to 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 shares to Lincoln Park and the Purchase Agreement may be used at any time at our discretion without any cost to us.

Pursuant to the terms of the Purchase Agreement, we have the right, but not the obligation, to direct Lincoln Park to purchase up to \$5,000,000 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 offered under this prospectus in order to receive aggregate gross proceeds equal to the \$5,000,000 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 ultimately offered for resale by Lincoln Park under this prospectus is dependent upon the number of shares 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 equal or exceed \$0.434, 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 and its affiliates, would exceed the Beneficial Ownership Cap.

The following table sets forth the amount of gross proceeds we would receive from Lincoln Park from our sale of shares to Lincoln Park under the Purchase Agreement at varying purchase prices:

Assumed Average Purchase Price Per Share	Number of Registered Shares to be Issued if Full Purchase (1)	Percentage of Outstanding Shares After Giving Effect to the Issuance to Lincoln Park (2)	Proceeds from the Sale of Shares to Lincoln Park Under the \$5M Purchase Agreement
\$0.25	3,727,837	24.98%	\$931,959
\$0.44 (3)	3,727,837	24.98%	\$1,640,248
\$0.50	3,727,837	24.98%	\$1,863,919
\$1.00	3,727,837	24.98%	\$3,727,837
\$2.00	2,500,000	18.26%	\$5,000,000

(1) Although the Purchase Agreement provides that we may sell up to \$5,000,000 of our common stock to Lincoln Park, we are only registering 3,727,387 shares under this prospectus, which may or may not cover all the shares we ultimately sell to Lincoln Park under the Purchase Agreement, depending on the purchase price per share. As a result, we have included in this column only those shares that we are registering in this offering. If we seek to issue shares of our common stock, including shares from other transactions that may be aggregated with the transactions contemplated by the Purchase Agreement under the applicable rules of The Nasdaq Capital Market, in excess of 2,238,533 shares, or 19.99% of the total common stock outstanding immediately prior to the execution of the Purchase Agreement, we may be required to seek stockholder approval in order to be in compliance with the rules of The Nasdaq Capital Market.

- (2) The denominator is based on 11,192,666 shares outstanding as of September 15, 2018, adjusted to include the number of shares 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 issuable under the Purchase Agreement at the corresponding assumed purchase price set forth in the adjacent column.
- (3) The closing sale price of our shares on October 4, 2018.



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 \$5,000,000 aggregate gross proceeds under the Purchase Agreement from any sales we make to Lincoln Park pursuant to the Purchase Agreement. We estimate that the net proceeds to us from the sale of our common stock to Lincoln Park pursuant to the Purchase Agreement will be up to \$4.8 million over an approximately 24-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 that agreement and other estimated fees and expenses. See "Plan of Distribution" elsewhere in this prospectus for more information.

We expect to use any proceeds that we receive under the Purchase Agreement for working capital and general corporate purposes. It is possible that no shares will be issued under the Purchase Agreement.

After the issuance of any of the shares issuable under the Purchase Agreement, we would not receive any proceeds from the resale of those shares by Lincoln Park because those shares will be sold for the account of Lincoln Park.

We will incur all costs associated with this registration statement and prospectus.

SELLING STOCKHOLDER

This prospectus relates to the possible resale by the selling stockholder, Lincoln Park, of shares of common stock that have been or may be issued to Lincoln Park pursuant to the Purchase Agreement. We are filing the registration statement of which this prospectus forms a part pursuant to the provisions of the Registration Rights Agreement, which we entered into with Lincoln Park on September 21, 2018 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 that we have issued or may sell to Lincoln Park under the Purchase Agreement. The selling stockholder may sell some, all or none of its shares. We do not know how long the selling stockholder will hold the shares before selling them, and we currently have no agreements, arrangements or understandings with the selling stockholder regarding the sale of any of the shares.

The following table presents information regarding the selling stockholder and the shares 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 September 21, 2018. 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 other than pursuant to the prior purchase agreement and registration rights agreement between us and Lincoln Park, each dated December 22, 2016. Beneficial ownership is determined in accordance with Section 13(d) of the Exchange Act and Rule 13d-3 thereunder.

			Shares to be Sold in this	
			Offering Assuming The	
		Percentage of	Company issues the	Percentage of
	Shares Beneficially	Outstanding Shares Maximum Number of Shares Outstanding Share		
	Owned Before this	Beneficially Owned	Under the Purchase	Beneficially Owner
Selling Stockholder	Offering	Before this Offering	Agreement	After this Offering
Lincoln Park Capital Fund, LLC (1)	68,313 (2)	* (3)	3,727,387 (4)	(2)(4)

*Less than 1%

- (1) Josh Scheinfeld and Jonathan Cope, the Managing Members of Lincoln Park Capital, LLC, are deemed to be beneficial owners of all of the shares of common stock owned by Lincoln Park Capital Fund, LLC. Messrs. Cope and Scheinfeld have shared voting and investment power over the shares being offered under the prospectus filed with the SEC in connection with the transactions contemplated under the Purchase Agreement. Lincoln Park Capital, LLC is not a licensed broker dealer or an affiliate of a licensed broker dealer.
- (2) Represents an aggregate of 68,313 shares of our common stock, representing shares that may be issued to Lincoln Park as of the date of this prospectus upon exercise of warrants to purchase our common stock, at certain fixed prices (that may be subject to adjustment as provided in such warrants), which warrants were acquired by Lincoln Park in connection with prior public offerings of securities. Lincoln Park may not exercise these warrants if such shares, when aggregated with all other shares of our common stock then beneficially owned by Lincoln Park and its affiliates, would result in Lincoln Park and its affiliates having beneficial ownership of more than 4.99% of the then total outstanding shares of our common stock, as calculated in accordance with the terms of such warrants. In accordance with Rule 13d-3(d) under the Exchange Act, we have excluded from the number of shares beneficially owned prior to the offering all of the shares of common stock that Lincoln Park may be required to purchase pursuant to the Purchase Agreement because the issuance of such shares 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. Furthermore, under the terms of the Purchase Agreement, issuances and



sales of shares of our common stock to Lincoln Park are subject to certain limitations on the amounts we may sell to Lincoln Park at any 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.

- (3) Based on 11,192,666 outstanding shares of our common stock as of September 15, 2018.
- (4) Although the Purchase Agreement provides that we may sell up to \$5,000,000 of our common stock to Lincoln Park, only 3,727,387 shares of our common stock are being offered under this prospectus that may be sold by us to Lincoln Park at our discretion from time to time over a 24-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 \$5,000,000 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.

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DILUTION

Purchasers of our common stock in this offering will experience an immediate dilution of the net tangible book value per share of our common stock. Our net tangible book value as of June 30, 2018 was approximately \$(5.8) million, or \$(0.93) per share of our common stock (based upon 6,176,054 shares of our common stock outstanding). Net tangible book value per share is equal to our total tangible assets less our total liabilities, divided by the number of shares of our outstanding common stock.

Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers of common stock in this offering, assuming a purchase price of \$0.44 per share (the closing price of our common stock on October 4, 2018), and the as adjusted net tangible book value per share of common stock immediately after the completion of this offering. Therefore, after giving effect to our assumed receipt of \$1.4 million in estimated net proceeds from the issuance of 3,727,387 shares of common stock under the Purchase Agreement and registered in this offering (assuming a purchase price of \$0.44 per share for 3,727,387 shares, estimated offering expenses of \$145,000, a commitment fee of \$100,000, and assuming all such sales and issuances were made on June 30, 2018), our as adjusted net tangible book value as of June 30, 2018 would have been \$(4.4) million, or \$(0.44) per share. This would represent an immediate increase in the net tangible book value of \$0.49 per share to existing stockholders and an immediate dilution of \$0.88 per share to new investors purchasing shares of our common stock in this offering. The following table illustrates this per share dilution:

Assumed public offering price per share of common stock		\$ 0.44
Net tangible book value per share as of June 30, 2018	\$ (0.93)	
Increase in net tangible book value per share attributable to this offering	0.49	
As adjusted net tangible book value per share after this offering		(0.44)
Dilution per share to new investors		\$ 0.88

The information above is as of June 30, 2018 and excludes:

- 176,921 shares of common stock issuable upon the exercise of stock options outstanding as of June 30, 2018 with a weighted average exercise price of \$63.44 per share;
- 51 shares of common stock issuable upon the vesting of restricted stock awards outstanding as of June 30, 2018;
- 879,958 shares of common stock available for future grants under our 2014 Equity Incentive Plan as of June 30, 2018;
- 30,367 shares of common stock available for future grants under our 2015 New Employee Incentive Plan as of June 30, 2018;
- 2,165,956 shares of our common stock issuable upon the exercise of outstanding warrants as of June 30, 2018 with a weighted-average exercise price of \$9.45 per share;
- 6,723 shares of our Series C convertible preferred stock and an additional 7,059,150 shares of common stock issuable upon the exercise of warrants issued after June 30, 2018 pursuant to our Rights Offering which closed on July 25, 2018, and
- 1,372,404 shares of our common stock issued after June 30, 2018 pursuant to our at-the-market sales agreement.

MARKET PRICE OF OUR COMMON STOCK AND RELATED STOCKHOLDER MATTERS

From August 2000 (our initial public offering in Germany) until September 2007, our common stock was quoted on the Frankfurt Stock Exchange under the symbol "XMPA" (formerly XMP). In September 2007, our stock closed trading on the Frankfurt Stock Exchange. In December 2005, our common stock commenced trading on the Nasdaq Capital Market under the symbol "CYTX." From December 2005 until February 2006, our common stock traded on the Nasdaq Capital Market, from February 2006 until February 2016, it traded on the Nasdaq Global Market, and since February 2016, it has traded on the Nasdaq Capital Market. Our common stock has, from time to time, traded on a limited, sporadic and volatile basis. The following tables show the high and low sales prices for our common stock for the periods indicated, as reported on the Nasdaq Global Market or the Nasdaq Capital Market, as applicable. These prices do not include retail markups, markdowns or commissions.

	Price Ranges		
	High	Low	
Fiscal Year Ending December 31, 2018			
First Quarter	\$5.00	\$2.70	
Second Quarter	\$3.20	\$1.45	
Third Quarter	\$1.88	\$0.32	
Fourth Quarter (through October 4, 2018)	\$0.51	\$0.40	
Fiscal Year Ended December 31, 2017			
First Quarter	\$19.90	\$15.30	
Second Quarter	\$17.20	\$9.20	
Third Quarter	\$11.70	\$3.10	
Fourth Quarter	\$6.30	\$2.30	
Fiscal Year Ended December 31, 2016			
First Quarter	\$33.00	\$19.50	
Second Quarter	\$52.50	\$20.00	
Third Quarter	\$22.50	\$18.30	
Fourth Quarter	\$20.00	\$13.60	

The closing price of our common stock on October 4, 2018 was \$0.44 per share. All of our outstanding shares have been deposited with the Depository Trust & Clearing Corporation, or DTCC, since December 2005. As of September 15, 2018, we had approximately 15 record holders of our common stock. Because many of our shares are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of individual stockholders represented by these record holders.

DIVIDEND POLICY

We have never paid cash dividends on our common stock in the past and we currently anticipate that no cash dividends will be paid on common stock in the foreseeable future. Furthermore, our Loan and Security Agreement with Oxford Finance LLC currently prohibits our issuance of cash dividends. We expect as of the date hereof to retain any future earnings to fund the operation and expansion of our business.

DESCRIPTION OF CAPITAL STOCK

Common Stock

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

We have 100,000,000 shares of authorized common stock. As of September 15, 2018, there were 11,192,666 shares of common stock issued and outstanding, warrants to purchase 9,225,106 shares of common stock outstanding, options to purchase 176,921 shares of common stock outstanding and 51 shares of common stock issuable upon vesting of restricted stock awards. The holders of common stock possess exclusive voting rights in us, except to the extent our board of directors specifies voting power with respect to any other class of securities issued in the future. Each holder of our common stock is entitled to one vote for each share held of record on each matter submitted to a vote of stockholders, including the election of directors. Stockholders do not have any right to cumulate votes in the election of directors.

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

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

Our common stock is listed on Nasdaq under the symbol "CYTX."

Preferred Stock

We have 5,000,000 shares of authorized preferred stock, \$0.001 par value, 30,223 shares of which were issued and 4,944 of which were outstanding as of September 15, 2018. Of this amount, 13,500 shares have been designated Series A 3.6% Convertible Preferred Stock, none of which are outstanding, 10,000 shares have been designated Series B Convertible Preferred Stock, 1,114 shares of which are outstanding, and 6,723 shares have been designated Series C Convertible Preferred Stock, 3,830 shares of which are outstanding, in each case as of September 15, 2018. Our board of directors is authorized, without action by our stockholders, to classify or reclassify any unissued portion of our authorized shares of preferred stock to provide for the issuance of shares of other classes or series, including preferred stock in one or more series. Our board of directors may fix or alter the dividend rights, dividend rate, conversion rights, voting rights, rights and terms of redemption (including sinking fund provisions), the redemption price or prices, the liquidation preferences of any wholly unissued series of preferred stock, and the number of shares constituting any such series and the designation thereof, or any of them. Our board of directors may also

increase or decrease the number of shares of any series subsequent to the issue of shares of that series, but not below the number of shares of such series then outstanding. In case the number of shares of any series shall be so decreased, the shares constituting such decrease shall resume the status which they had prior to the adoption of the resolution originally fixing the number of shares of such series.

Series B Preferred Stock

Conversion. Each share of Series B Preferred Stock is convertible, at our option at any time on or after November 28, 2018 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 \$3.333 per share. In addition, the conversion price per share is subject to adjustment for stock dividends, distributions, subdivisions, combinations or reclassifications. Subject to limited exceptions, a holder of the Series B Preferred Stock will not have the right to convert any portion of the Series B Preferred Stock to the extent that, after giving effect to the conversion, the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of shares of our common stock outstanding immediately after giving effect to its conversion.

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

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

Voting Rights. Except as otherwise provided in the certificate of designation 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 is convertible, at our option at any time on or after July 25, 2020 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 \$0.7986 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 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, 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 shall be reduced to an amount equal to such lower price pursuant to the terms of the certificate of designation.

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

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

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

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

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

Possible Anti-Takeover Effects of Delaware Law and our Certificate of Incorporation and Bylaws

Delaware Anti-Takeover Statute

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

Board Vacancies

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

Undesignated Preferred Stock

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

Special Meeting Requirements

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

No Cumulative Voting

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

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

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

Transfer Agent

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

PLAN OF DISTRIBUTION

The common stock offered by this prospectus is being offered by the selling stockholder, Lincoln Park. The common stock may be sold or distributed from time to time by the selling stockholder directly to one or more purchasers or through brokers, dealers, or underwriters who may act solely as agents at market prices prevailing at the time of sale, at prices related to the prevailing market prices, at negotiated prices, or at fixed prices, which may be changed. The sale of the common stock offered by this prospectus 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 common stock;
- in other ways not involving market makers or established business markets, including direct sales to purchasers or sales effected through agents;
- in privately negotiated transactions; or
- any combination of the foregoing.

In order to comply with the securities laws of certain states, if applicable, the shares may be sold only through registered or licensed brokers or dealers. In addition, in certain states, the shares may not be sold unless they have been registered or qualified for sale in the state or an exemption from the 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 the common stock that it may purchase 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 as agents may receive compensation in the form of commissions, discounts, or concessions from the selling stockholder and/or purchasers of the common stock for whom the broker-dealers may act as agent. The compensation paid to a particular broker-dealer 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.

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 offered by this prospectus. At the time a particular offer of shares is made, a prospectus supplement, if required, will be distributed that will set forth the names of any agents, underwriters or dealers and any compensation from the selling stockholder, and any other required information.

We will pay the expenses incident to the registration, offering, and sale of the shares to Lincoln Park. We have agreed to indemnify Lincoln Park and certain other persons against certain liabilities in connection with the offering of shares of common stock offered hereby, including liabilities arising under the Securities Act or, if such indemnity is unavailable, to contribute amounts required to be paid in respect of such liabilities. 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 offered by this prospectus have been sold by Lincoln Park.

Our common stock is quoted on The Nasdaq Capital Market under the symbol "CYTX".

EXPERTS

The consolidated financial statements as of and for the years ended December 31, 2017 and 2016, incorporated by reference in this Prospectus and in the Registration Statement have been so incorporated in reliance on the report of BDO USA, LLP, an independent registered public accounting firm (the report on the consolidated financial statements contains 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 the shares of common stock being offered by this prospectus will be passed upon for us by Latham & Watkins LLP, San Diego, 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 additional information and exhibits. We file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy the registration statement and any document we file with the SEC at the public reference room maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the public reference room by calling the SEC at 1-800-SEC-0330. 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. The information on the SEC's website is not part of this prospectus, and any references to this website or any other website are inactive textual references only.

INCORPORATION BY REFERENCE

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

- our Annual Report on Form 10-K for the year ended December 31, 2017, filed on March 9, 2018;
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2018 and June 30, 2018, filed on May 11, 2018 and August 14, 2018, respectively;
- our Definitive Proxy Statement on Schedule 14A (other than information furnished rather than filed), filed on April 6, 2018;
- our Current Reports on Form 8-K filed on January 29, 2018, February 9, 2018, February 23, 2018, March 7, 2018, March 16, 2018, May 18, 2018, May 23, 2018, June 1, 2018, June 12, 2018, June 20, 2018, July 13, 2018, July 25, 2018, August 31, 2018, September 4, 2018 and September 21, 2018; and
- the description of our common stock contained in our registration statement on Form 10/A filed with the SEC on July 16, 2001 (File No. 000-32501) and any amendment or report filed with the SEC for the purpose of updating the description.

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

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

We will provide without charge to each person, including any beneficial owner, to whom this prospectus is delivered, upon written or oral request, a copy of any or all documents that are incorporated by reference into this prospectus, but not delivered with the prospectus, other than exhibits to such documents unless such exhibits are specifically incorporated by reference into the documents that this prospectus incorporates. You should direct written requests to: Cytori Therapeutics, Inc., 3020 Callan Road, San Diego, CA 92121, Attn: Investor Relations, or you may call us at (858) 458-0900.

3,727,387 Shares

CYTORI THERAPEUTICS, INC.

Common Stock



PROSPECTUS

October 5, 2018