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Registration No. 333-258453

PROSPECTUS

CytRx Corporation
20,727,274 Shares of Common Stock

This prospectus relates to the resale by the selling stockholder named in this prospectus from time to time of up to 20,727,274 shares of our common stock, par value \$0.001 per share. These 20,727,274 shares of common stock consist of:

- up to an aggregate of 9,363,637 shares of common stock issuable upon the conversion of 8,240 shares of Series C 10.00% Convertible Preferred Stock (the “Series C Preferred Stock”) that were issued in a private placement (the “July 2021 Private Placement”) pursuant to that certain securities purchase agreement, dated as of July 13, 2021, by and among us and the purchaser named therein (the “Securities Purchase Agreement”); and
- up to an aggregate of 11,363,637 shares of common stock issuable upon the exercise of preferred investment options (the “Preferred Investment Options”) that were issued pursuant to the Securities Purchase Agreement entered into in connection with the July 2021 Private Placement.

The shares of Series C Preferred Stock and the Preferred Investment Options were issued in reliance upon the exemption from the registration requirements in Section 4(a)(2) of the Securities Act and Regulation D promulgated thereunder. The purchaser represented that it was an “accredited investor” (as defined by Rule 501 under the Securities Act). We are registering the offer and resale of the shares of common stock issuable upon the conversion and exercise of the Series C Preferred Stock and the Preferred Investment Options, respectively (collectively, the “Registrable Securities”), to satisfy a provision in that certain registration rights agreement, dated July 13, 2021 (the “Registration Rights Agreement”), pursuant to which we agreed to register the resale of the Registrable Securities.

On March 15, 2022, at a reconvened special meeting of stockholders that had been adjourned on September 23, 2021, stockholders of the Company voted to approve an amendment to our restated certificate of incorporation, as amended (the “Certificate of Incorporation”) to increase the number of shares of our authorized common stock above 41,666,666 shares, to 62,393,940 shares, and to make a corresponding change to the number of authorized shares of capital stock (the “Authorized Share Increase”), thereby authorizing sufficient shares of common stock to issue the shares of common stock being registered hereunder. The selling stockholder named in this prospectus, or its donees, pledgees, transferees or other successors-in-interest, may resell the shares of common stock covered by this prospectus through public or private transactions at prevailing market prices, at prices related to prevailing market prices or at privately negotiated prices. For additional information on the possible methods of sale that may be used by the selling stockholder, you should refer to the section of this prospectus entitled “Plan of Distribution.”

We will not receive any of the proceeds from the sale of common stock by the selling stockholder. However, we will receive proceeds from the exercise of the Preferred Investment Options if the Preferred Investment Options are exercised for cash. We intend to use those proceeds, if any, for working capital purposes.

Any shares of common stock subject to resale hereunder will have been issued by us and acquired by the selling stockholder prior to any resale of such shares pursuant to this prospectus.

No underwriter or other person has been engaged to facilitate the sale of the common stock in this offering. We will bear all costs, expenses and fees in connection with the registration of the common stock. The selling stockholder will bear all commissions and discounts, if any, attributable to its respective sales of our common stock.

Our common stock is quoted on The OTC Markets under the symbol “CYTR.” On March 22, 2022, the last reported sales price for our common stock was \$0.45 per share.

Investment in our common stock involves risk. See “Risk Factors” contained in this prospectus, in our periodic reports filed from time to time with the Securities and Exchange Commission, which are incorporated by reference in this prospectus and in any applicable prospectus supplement. You should carefully read this prospectus and the accompanying prospectus supplement, together with the documents we incorporate by reference, before you invest in our common stock.

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

The date of this prospectus is March [25], 2022.

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ABOUT THIS PROSPECTUS

This prospectus is part of the registration statement that we filed with the Securities and Exchange Commission pursuant to which the selling stockholder named herein may offer and sell or otherwise dispose of the Registrable Securities covered by this prospectus. As permitted by the rules and regulations of the Securities and Exchange Commission, the registration statement filed by us includes additional information not contained in this prospectus.

This prospectus and the documents incorporated by reference into this prospectus include important information about us, the securities being offered and other information you should know before investing in our securities. You should not assume that the information contained in this prospectus is accurate on any date subsequent to the date set forth on the front cover of this prospectus or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus is delivered or shares of common stock are sold or otherwise disposed of on a later date. It is important for you to read and consider all information contained in this prospectus, including the documents incorporated by reference therein, in making your investment decision. You should also read and consider the information in the documents to which we have referred you under “Where You Can Find More Information” and “Incorporation of Certain Information by Reference” in this prospectus.

You should rely only on this prospectus and the information incorporated or deemed to be incorporated by reference in this prospectus. We have not, and the selling stockholder has not, authorized anyone to give any information or to make any representation to you other than as contained or incorporated by reference in this prospectus. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus does not constitute an offer to sell or the solicitation of an offer to buy securities in any jurisdiction to any person to whom it is unlawful to make such offer or solicitation in such jurisdiction.

We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference in this prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

Unless otherwise indicated, information contained or incorporated by reference in this prospectus concerning our industry, including our general expectations and market opportunity, is based on information from our own management estimates and research, as well as from industry and general publications and research, surveys and studies conducted by third parties. Management estimates are derived from publicly available information, our knowledge of our industry and assumptions based on such information and knowledge, which we believe to be reasonable. In addition, assumptions and estimates of our and our industry’s future performance are necessarily uncertain due to a variety of factors, including those described in “Risk Factors” beginning on page 9 of this prospectus. These and other factors could cause our future performance to differ materially from our assumptions and estimates.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere or incorporated by reference in this prospectus and does not contain all of the information you should consider before investing in our securities. You should carefully read this entire prospectus, the information incorporated by reference and the registration statement of which this prospectus is a part in their entirety before investing in our securities, including the information discussed under “Risk Factors” in this prospectus and the documents incorporated by reference and our financial statements and related notes that are incorporated by reference in this prospectus. In this prospectus, unless otherwise stated or the context indicates otherwise requires, references to “CytRx”, “Company”, “we”, “us”, “our” or similar references mean CytRx Corporation and its subsidiaries on a consolidated basis. References to “CytRx Corporation” refer to CytRx Corporation on an unconsolidated basis. References to “Centurion” refer to Centurion BioPharma Corporation, CytRx Corporation’s wholly-owned subsidiary, through which we conducted our laboratory operations in Freiburg, Germany until the end of January 2019.

Overview

We are a biopharmaceutical research and development company specializing in oncology. The Company's focus has been on the discovery, research and clinical development of novel anti-cancer drug candidates that employ novel linker technologies to enhance the accumulation and release of cytotoxic anti-cancer agents at the tumor. During 2017, CytRx's discovery laboratory, located in Freiburg, Germany, synthesized and tested over 75 rationally designed drug conjugates with highly potent payloads, culminating in the creation of two distinct classes of compounds. Four lead candidates (LADR-7 through LADR-10) were selected based on *in vitro* and animal studies, in several different cancer models, stability, and manufacturing feasibility. In addition, a novel albumin companion diagnostic, ACDx™, was developed to identify patients with cancer who are most likely to benefit from treatment with these drug candidates.

On June 1, 2018, CytRx launched Centurion BioPharma Corporation ("Centurion"), a private subsidiary, and transferred all of its assets, liabilities and personnel associated with the laboratory operations in Freiburg, Germany. In connection with said transfer, the Company and Centurion entered into a Management Services Agreement whereby the Company agreed to render advisory, consulting, financial and administrative services to Centurion, for which Centurion shall reimburse the Company for the cost of such services plus a 5% service charge. The Management Services Agreement may be terminated by either party at any time. Centurion is focused on the development of personalized medicine for solid tumor treatment. On December 21, 2018, CytRx announced that Centurion had concluded the pre-clinical phase of development for its four LADR™ drug candidates, and for its albumin companion diagnostic (ACDx™). As a result of completing this work, operations taking place at the pre-clinical laboratory in Freiburg, Germany would no longer be needed and, accordingly, the lab was closed at the end of January 2019.

LADR Drug Discovery Platform and Centurion

Centurion's LADR™ (Linker Activated Drug Release) is a platform for formulating cytotoxic cancer drugs that offer improved efficacy with reduced side effects. LADR combines our expertise in linker chemistry and albumin biology to create a pipeline of anti-cancer molecules that deliver prodrugs to the tumor environment and then activate the drug inside the tumor. Such a trojan horse strategy reduces off-target side effects outside the tumor, thus allowing 10-1,000 fold higher dosing to be given.

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The first-generation ("gen") product candidate employing our tumor targeting and drug release system is aldoxorubicin, described below. Our next-gen products are composed of two classes of ultra-high potency albumin-binding drug conjugates, termed LADR 7 through LADR 10. These drug conjugates combine the proprietary LADR™ linkers with novel derivatives of the auristatin and maytansinoid drug classes. These payloads historically have required a targeting antibody for successful administration to humans. Our drug conjugates eliminate the need for a targeting antibody and provide a small molecule therapeutic option with potential broader applicability.

Centurion's postulated mechanism of action for the albumin-binding drug conjugates is as follows:

- after administration, the linker portion of the drug conjugate forms a rapid and specific covalent bond to the cysteine-34 position of circulating albumin;
- circulating albumin preferentially accumulates at the tumors, bypassing concentration in other non-tumor sites, including the heart, liver and gastrointestinal tract due to a mechanism called "Enhanced Permeability and Retention";
- once localized at the tumor, the acid-sensitive linker is cleaved due to the specific conditions within the tumor and in the tumor microenvironment; and

- free active drug is then released into the tumor.

Centurion's novel companion diagnostic, ACDx™ (albumin companion diagnostic), was developed to identify patients with cancer who are most likely to benefit from treatment with the four LADR lead assets.

On March 9, 2022, Centurion was merged into the Company.

Business Strategy for LADR™ Platform

Currently, the Company continues to work on identifying partnership or financing opportunities for LADR™ ultra-high potency drug conjugates and their albumin companion diagnostic. We have concluded all research and development on LADR and its companion diagnostic and continue to focus on identifying partnership or financing opportunities.

Aldoxorubicin

Until July 2017, we were concentrating on the research and clinical development of aldoxorubicin, which is the widely-used cytotoxin doxorubicin, modified with our LADR delivery and concentration system. Modifying doxorubicin with our LADR™ system allows for delivery of higher amounts of doxorubicin (3½ to 4 times) without several of the major dose-limiting toxicities seen with administration of doxorubicin alone.

On July 27, 2017, we entered into an exclusive worldwide license with ImmunityBio, Inc. (formerly known as NantCell, Inc. ("ImmunityBio")), granting to ImmunityBio the exclusive rights to develop, manufacture and commercialize aldoxorubicin in all indications. As a result, the Company is no longer working on development of aldoxorubicin (ImmunityBio merged with NantKwest, Inc. in March 2021). As part of the license, ImmunityBio made a strategic investment of \$13 million in CytRx common stock at \$6.60 per share, a premium of 92% to the market price on that date. We also issued ImmunityBio a warrant to purchase up to 500,000 shares of common stock at \$6.60, which expired on January 26, 2019. We are entitled to receive up to an aggregate of \$343 million in potential milestone payments contingent upon achievement of certain regulatory approvals and commercial milestones. We are also entitled to receive ascending double-digit royalties for net sales for soft tissue sarcomas and mid to high single digit royalties for other indications. There can be no assurance that ImmunityBio will achieve such milestones, approvals or sales with respect to aldoxorubicin. ImmunityBio has initiated a Phase 2, randomized, three-cohort, open-label registrational-intent study for first-line and second-line treatment of locally advanced or metastatic pancreatic cancer, which includes aldoxorubicin. On October 13, 2021, ImmunityBio announced that the trial's Cohort C was fully enrolled. In January 2022 at the ASCO Gastrointestinal Cancer Symposium, they reported that 27% of third-line or greater patients (17/63) remain on study and that the median overall survival in this highly advanced group of patients (who failed two to six prior lines of treatment) is 5.8 months (95% CI: 3.9, 6.9 months) exceeding the approximately three-month historical median overall survival. Of the 63 patients, 30 (48%) had progressed after two prior lines of therapy. Median overall survival in this group was 6.3 months (95% CI: 5.0, 9.8 months), more than doubling the historical overall survival. (Survival of three months as reported by Manax et al ASCO GI 2019). In Cohort C, four patients (7%) experienced treatment-related SAEs that included peripheral edema, pyrexia, anemia and atrial flutter. No treatment-related deaths were reported. Based on the strength of earlier data and the significant unmet medical need, ImmunityBio submitted an amendment to the U.S. Food and Drug Administration (the "FDA") to increase enrollment in Cohort C and plan to meet with the FDA in 2022 to discuss a potential path for the approval of combination therapies for pancreatic cancer.

Aldoxorubicin is a conjugate of the commonly prescribed cytotoxin agent doxorubicin that binds to circulating albumin in the bloodstream and is believed to concentrate the drug at the site of the tumor. Aldoxorubicin, has been tested in over 600 patients with various types of cancer. Specifically, it is comprised of (6-maleimidocaproyl) hydrazine, an acid-sensitive molecule that is conjugated to doxorubicin. The initial indication for aldoxorubicin was for patients with advanced soft tissue sarcomas (STS).

Aldoxorubicin has received Orphan Drug Designation (ODD) by the U.S. FDA for the treatment of STS. ODD provides several benefits, including seven years of market exclusivity after approval, certain R&D related tax

credits, and protocol assistance by the FDA. European regulators granted aldoxorubicin Orphan designation for STS, which confers ten years of market exclusivity, among other benefits.

ImmunityBio also lists ongoing clinical studies in head and neck and triple-negative breast cancer and has submitted a protocol with the FDA for glioblastoma; it is currently reviewing its options in STS.

Molecular Chaperone Assets (Orphazyme)

In 2011, CytRx sold the rights to arimoclomol and irovanadine, based on molecular chaperone regulation technology, to Orphazyme A/S (formerly Orphazyme ApS) in exchange for a one-time, upfront payment and the right to receive up to a total of \$120 million in milestone payments upon the achievement of certain pre-specified regulatory and business milestones, as well as royalty payments based on a specified percentage of any net sales of products derived from arimoclomol. As a result of Orphazyme's disclosure that the pivotal phase 3 clinical trial for arimoclomol in Amyotrophic Lateral Sclerosis did not meet its primary and secondary endpoints, the maximum amount that CytRx has the right to receive is now approximately \$100 million. Orphazyme is testing arimoclomol in Niemann-Pick disease Type C ("NPC") and Gaucher disease. Orphazyme has highlighted positive Phase 2/3 clinical trial data in patients with NPC and previously submitted a New Drug Application ("NDA") with the FDA. On June 18, 2021, Orphazyme announced it had received a Complete Response Letter from the FDA indicating the need for additional data. In late October 2021, Orphazyme announced it held a Type A meeting with the FDA, at which the FDA recommended that Orphazyme submit additional data, information and analyses to address certain topics in the Complete Response Letter and engage in further interactions with the FDA to identify a pathway to resubmission. The FDA concurred with Orphazyme's proposal to remove the cognition domain from the NPC Clinical Severity Scale ("NPCCSS") endpoint, with the result that the primary endpoint is permitted to be recalculated using the 4-domain NPCCSS, subject to the submission of additional requested information which Orphazyme has publicly indicated that it intends to provide. To bolster the confirmatory evidence already submitted, the FDA affirmed that it would require additional in vivo or pharmacodynamic (PD)/pharmacokinetic (PK) data. Orphazyme is planning to request a Type C Meeting with the FDA in the second quarter of 2022. Subject to discussions with the regulatory body, Orphazyme has publicly indicated that it plans to resubmit the NDA for arimoclomol in the second half of 2022.

Orphazyme had also submitted a Marketing Authorization Application ("MAA") with the European Medicines Agency (the "EMA"). In February 2022, Orphazyme announced that although they had received positive feedback from the Committee for Medicinal Products for Human Use ("CHMP") of the EMA, they were notified by the CHMP of a negative trend vote on the MAA for arimoclomol for NPC following an oral explanation. The trend vote indicates that the CHMP's current orientation is to not approve arimoclomol when it convenes by the end of March 2022. Orphazyme has publicly indicated that it considers it unlikely that this position will change before the formal vote is undertaken in March 2022. Orphazyme has publicly indicated that it will assess its strategic options and provide an update to the market at the applicable time.

Innovive Acquisition Agreement

On September 19, 2008, we completed our merger acquisition of Innovive Pharmaceuticals, Inc., or Innovive, and its clinical-stage cancer product candidates, including aldoxorubicin and tamibarotene. Under the merger agreement by which we acquired Innovive, we agreed to pay the former Innovive stockholders up to approximately \$18.3 million of future earnout merger consideration, subject to our achievement of specified net sales under the Innovive license agreements. The earnout merger consideration, if any, will be payable in shares of our common stock, subject to specified conditions, or, at our election, in cash or by a combination of shares of our common stock and cash. Our common stock will be valued for purposes of any future earnout merger consideration based upon the trading price of our common stock at the time the earnout merger consideration is paid. The earnout will be accrued if and when earned. As of December 31, 2021 and 2020, no amounts were due under this agreement.

Research and Development

Expenditures for research and development activities related to continuing operations were \$0 for the year ended December 31, 2021 and \$0.8 million for the year ended December 31, 2020, or approximately 0% and 12%, respectively, of our total expenses. For further information regarding our research and development activities, see "Management's Discussion and Analysis of Financial Condition and Results of Operations" included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2021 which is incorporated herein by reference.

Commercialization and Marketing

We currently have no sales, marketing or commercial product distribution capabilities or experience in marketing products.

We are searching for a development and commercialization partner or a financing for our LADR drug candidates and do not currently plan on commercializing them ourselves. Over the past two years, we have been unable to attract a development and commercial partner nor a financing for this endeavor; however, we are continuing to pursue all possibilities.

Patents and Proprietary Technology

We actively seek patent protection for our technologies, processes, uses, and ongoing improvements and consider our patents and other intellectual property to be critical to our business. We regularly evaluate the patentability of new inventions and improvements developed by us or our collaborators, and, whenever appropriate, will endeavor to file U.S. and international patent applications to protect these new inventions and improvements. We cannot be certain that any of the current pending patent applications we have filed or licensed, or any new patent applications we may file or license, will ever be issued in the U.S. or any other country. There also is no assurance that any issued patents will be effective to prevent others from using our products or processes. It is also possible that any patents issued to us, as well as those we have licensed or may license in the future, may be held invalid or unenforceable by a court, or third parties could obtain patents that we would need to either license or to design around, which we may be unable to do. Current and future competitors may have licensed or filed patent applications or received patents and may acquire additional patents and proprietary rights relating to compounds, products or processes that may be competitive with ours.

In addition to patent protection, we attempt to protect our proprietary products, processes and other information by relying on trade secrets and non-disclosure agreements with our employees, consultants and certain other persons who have access to such products, processes and information. Under the agreements, all inventions conceived by employees are our exclusive property, but there is no assurance that these agreements will afford significant protection against misappropriation or unauthorized disclosure of our trade secrets and confidential information.

As of December 31, 2021, we have three pending U.S. patent applications and thirty-eight pending foreign patent applications and twenty-two granted foreign patents covering our LADR™-related technology including LADR-7, LADR-8, LADR-9 and LADR-10. The un-extended patent term of patents that issue covering our LADR™-related technology is between June 2036 and November 2038. We also have one pending US patent application and fourteen pending foreign patent applications covering our albumin companion diagnostic (ACDx™). The un-extended patent term of patents that issue covering our ACDx™ is July 2039. The patents and patent applications covering our LADR™-related technology, and ACDx™ are assigned to Centurion. In conjunction with our July 27, 2017 ImmunityBio licensing agreement, we granted ImmunityBio an exclusive license to all our aldoxorubicin-related patents, including the rights in three granted U.S. patents, eighteen granted foreign patents and eight pending foreign patent applications covering aldoxorubicin and related technologies. Our intellectual property holdings relating to aldoxorubicin, and related technologies include an exclusive license from Vergell Medical, S.A. or Vergell. Patents and applications that cover pharmaceutical compositions comprising aldoxorubicin and their use in treating cancer (including glioblastoma) have un-extended patent terms expiring between December 2033 and June 2034.

License Agreements

Aldoxorubicin

We are the licensee of patent rights held by Tumorforschungs GmbH (“KTB”) for the worldwide development and commercialization of aldoxorubicin under a license agreement dated April 17, 2006. In February 2017, we received notice that KTB had transferred and assigned its rights and obligations under the license to Vergell Medical, S.A., or Vergell. The license is exclusive and applies to all products that may be subject to the licensed intellectual property

in all fields of use. We may sublicense the intellectual property in our sole discretion. Pursuant to an amendment to the license agreement entered into in March 2014, we also have a non-exclusive worldwide license to any additional technology that is claimed or disclosed in the licensed patents and patent applications for use in the field of oncology.

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Under the agreement, we must make payments to Vergell in the aggregate of up to \$7.5 million upon meeting clinical and regulatory milestones, and up to and including the product's second final marketing approval. We also agreed to pay:

- commercially reasonable royalties based on a percentage of net sales (as defined in the agreement);
- a percentage of any non-royalty sub-licensing income (as defined in the agreement); and
- milestones of \$1 million for each additional final marketing approval that we obtain.

In the event that we must pay a third party in order to exercise our rights to the intellectual property under the agreement, we are entitled to deduct a percentage of those payments from the royalties due Vergell, up to an agreed upon cap.

Under the agreement with Vergell, we must use commercially reasonable efforts to conduct the research and development activities we determine are necessary to obtain regulatory approval to market aldoxorubicin in those countries that we determine are commercially feasible. Under the agreement, Vergell is to use its commercially reasonable efforts to provide us with access to suppliers of the active pharmaceutical ingredient, or API, of aldoxorubicin, on the same terms and conditions as may be provided to Vergell by those suppliers.

The agreement will expire on a product-by-product basis upon the expiration of the subject patent rights. We have the right to terminate the agreement on 30 days' notice, provided we pay a cash penalty to Vergell. Vergell may terminate the agreement if we are in breach and the breach is not cured within a specified cure period, or if we fail to use diligent and commercial efforts to meet specified clinical milestones.

Molecular Chaperone Assets

The agreement relating to our worldwide rights to arimoclomol provides for our payment of up to an aggregate of \$3.65 million upon receipt of milestone payments from Orphayzme.

Corporate information

We are a Delaware corporation, incorporated in 1985. Our corporate offices are located at 11726 San Vicente Boulevard, Suite 650, Los Angeles, California 90049, and our telephone number is (310) 826-5648. Our web site is located at <http://www.cytrx.com>. The information included in, or linked to our website is not part of this prospectus. We have included our website address in this prospectus solely as a textual reference. We do not incorporate by reference into this prospectus the information on, or accessible through, our website, and you should not consider it as part of this prospectus.

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THE OFFERING

Common stock to be offered by the selling stockholder	Up to 20,727,274 shares of our common stock, which are comprised of (i) up to an aggregate of 9,363,637 shares of common stock issuable upon the conversion of 8,240 shares of Series C Preferred Stock, and (ii) up to an aggregate of 11,363,637 shares of common stock issuable upon the exercise of the Preferred Investment Options.
Use of Proceeds	All shares of our common stock offered by this prospectus are being registered for the accounts of the selling stockholder and we will not receive any proceeds from the sale of these shares. However, we will receive proceeds from the exercise of the Preferred Investment Options if the Preferred Investment Options are exercised for cash. We intend to use those proceeds, if any, for general corporate purposes.
Registration Rights	<p>Under the terms of the Registration Rights Agreement, we agreed to file this registration statement with respect to the registration of the resale by the selling stockholder of shares of common stock issuable upon the conversion of the shares of Series C Preferred Stock and the exercise of the Preferred Investment Options by the 5th day following the filing of the preliminary proxy statement (the “Proxy Statement”) seeking stockholder approval for the Authorized Share Increase. We also agreed to cause such registration statement to become effective under the Securities Act by the 75th calendar day following the date of the Registration Rights Agreement (or, in the event of a “full review” by the Securities and Exchange Commission, the 105th calendar day following the date of the Registration Rights Agreement). In addition, we agreed that, upon the registration statement being declared effective, we will use our best efforts to maintain the effectiveness of the registration statement until the date that (i) the selling stockholder has sold all of the shares of common stock issuable upon the conversion of the shares of Series C Preferred Stock and the exercise of the Preferred Investment Options or (ii) such shares may be resold by the selling stockholder pursuant to Rule 144 of the Securities Act, without the requirement for us to be in compliance with the current public information required under such rule and without volume or manner-of-sale restriction.</p> <p>See “Selling Stockholder” on page 9 of this prospectus for additional information.</p>
Plan of Distribution	<p>The selling stockholder named in this prospectus, or its pledgees, donees, transferees, distributees, beneficiaries or other successors-in-interest, may offer or sell the shares of common stock from time to time through public or private transactions at prevailing market prices, at prices related to prevailing market prices or at privately negotiated prices. The selling stockholder may also resell the shares of common stock to or through underwriters, broker-dealers or agents, who may receive compensation in the form of discounts, concessions or commissions.</p> <p>See “Plan of Distribution” beginning on page 15 of this prospectus for additional information on the methods of sale that may be used by the selling stockholder.</p>
OTC Markets Symbol	Our common stock is quoted on The OTC Markets under the symbol “CYTR.”

Risk Factors

Investing in our common stock involves significant risks. See “Risk Factors” beginning on page 9 of this prospectus and the documents incorporated by reference in this prospectus.

RISK FACTORS

An investment in our securities involves certain risks. Before investing in our securities, you should carefully consider the following risk factor and the risks, uncertainties and assumptions discussed under the heading “Risk Factors” included in our most recent Annual Report on Form 10-K, or any updates in our Quarterly Reports on Form 10-Q or Current Reports on Form 8-K, together with all of the other information appearing in this prospectus or incorporated by reference into this prospectus and which may be amended, supplemented or superseded from time to time by other reports we file with the Securities and Exchange Commission in the future. The risks so described are not the only risks facing our company. Additional risks not presently known to us or that we currently deem immaterial may also impair our business operations. Any of these risks could materially and adversely affect our business, financial condition, results of operations and cash flows and could result in a loss of all or part of your investment. In any case, the value of the securities offered by means of this prospectus could decline due to any of these risks, and you may lose all or part of your investment. Please also read carefully the section below entitled “Special Note Regarding Forward-Looking Statements.”

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Some of the statements contained or incorporated by reference in this prospectus or in the prospectus supplement may include forward-looking statements that reflect our current views with respect to our research and development activities, business strategy, business plan, financial performance and other future events. These statements include forward-looking statements both with respect to us, specifically, and the biotechnology sector, in general. We make these statements pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Statements that include the words “expect,” “intend,” “plan,” “believe,” “project,” “estimate,” “may,” “should,” “anticipate,” “will” and similar statements of a future or forward-looking nature identify forward-looking statements for purposes of the federal securities laws or otherwise.

All forward-looking statements involve inherent risks and uncertainties, and there are or will be important factors that could cause actual results to differ materially from those indicated in these statements. We believe that these factors include, but are not limited to, those factors set forth under the caption “Risk Factors” in this prospectus and in any prospectus supplement and under the captions “Business,” “Legal Proceedings,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” “Quantitative and Qualitative Disclosures About Market Risk” and “Controls and Procedures” in our most recent Annual Report on Form 10-K, Quarterly Reports on Form 10-Q and Forms 8-K incorporated herein by reference, all of which you should review carefully. Please consider our forward-looking statements in light of those risks as you read this prospectus and the prospectus supplement. We undertake no obligation to publicly update or review any forward-looking statement, whether as a result of new information, future developments or otherwise.

If one or more of these or other risks or uncertainties materializes, or if our underlying assumptions prove to be incorrect, actual results may vary materially from what we anticipate. All subsequent written and oral forward-looking statements attributable to us or individuals acting on our behalf are expressly qualified in their entirety by this Note. Before purchasing any of our securities, you should consider carefully all of the factors set forth or referred to in this prospectus and in the prospectus supplement that could cause actual results to differ.

USE OF PROCEEDS

All shares of our common stock offered by this prospectus are being registered for the accounts of the selling stockholder and we will not receive any proceeds from the sale of these shares. However, we will receive proceeds

from the exercise of the Preferred Investment Options if the Preferred Investment Options are exercised for cash. We intend to use those proceeds, if any, for working capital purposes.

SELLING STOCKHOLDER

Unless the context otherwise requires, as used in this prospectus, “selling stockholder” includes the selling stockholder listed below and its donees, pledgees, transferees or other successors-in-interest selling shares received after the date of this prospectus from the selling stockholder as a gift, pledge or other non-sale related transfer.

We have prepared this prospectus to allow the selling stockholder or its successors, assignees or other permitted transferees to sell or otherwise dispose of, from time to time, up to 20,727,274 shares of our common stock, which are comprised of (i) up to an aggregate of 9,363,637 shares of common stock issuable upon the conversion of the shares of Series C Preferred Stock, and (ii) up to an aggregate of 11,363,637 shares of common stock issuable upon the exercise of the Preferred Investment Options.

Private Placement of Series C Preferred Stock and Preferred Investment Options

On July 13, 2021, we entered into the Securities Purchase Agreement with Armistice Capital Master Fund Ltd. (“Armistice”), pursuant to which we issued and sold to Armistice, in a registered direct offering (the “July 2021 Registered Direct Offering” and, together with the July 2021 Private Placement, the “Offerings”), 2,000,000 shares (the “Shares”) of our common stock at a purchase price of \$0.88 per share, for aggregate gross proceeds of approximately \$1,760,000 before placement fees and estimated offering expenses. Concurrently with the sale of the Shares in the July 2021 Registered Direct Offering, in the July 2021 Private Placement, the Company also issued and sold to Armistice 8,240 shares of the Company’s Series C Preferred Stock at a price of \$1,000 per share, initially convertible into an aggregate of up to 9,363,637 shares of the Company’s common stock, at a conversion price of \$0.88 per share of common stock, together with Preferred Investment Options to purchase up to 11,363,637 shares of common stock, with an exercise price of \$0.88. The Offerings closed on July 15, 2021. The net proceeds to the Company from the Offerings, after deducting the placement agent’s fees and expenses and estimated offering expenses, were approximately \$9,142,000.

The Preferred Investment Options have a term of five and one-half years, commencing on the date on which an amendment to our Certificate of Incorporation that increases the number of authorized shares of Common Stock above 41,666,666 is filed and accepted with the Secretary of State of the State of Delaware (the “Authorized Share Increase Date”), which occurred on March 15, 2022.

Subject to certain beneficial ownership limitations, the Series C Preferred Stock shall vote on an “as-converted” basis on all matters submitted to the holders of our common stock for approval.

A holder of the shares of Series C Preferred Stock or the Preferred Investment Options may not convert or exercise, respectively, any portion of such holder’s Series C Preferred Stock or Preferred Investment Options to the extent that the holder, together with its affiliates, would beneficially own more than 9.99% of our outstanding shares of common stock immediately after conversion or exercise of the Series C Preferred Stock or Preferred Investment Options, respectively.

In connection with the July 2021 Private Placement, we entered into the Registration Rights Agreement with the purchaser under the Securities Purchase Agreement, pursuant to which, among other things, we agreed to prepare and file with the Securities and Exchange Commission a registration statement on Form S-3, or another appropriate form if we were not then eligible to register the Registrable Securities on Form S-3, to register for resale the shares of common stock issuable upon the conversion of the shares of Series C Preferred Stock and the exercise of the Preferred Investment Options by the 5th day following the filing of the Proxy Statement. We also agreed to cause such registration statement to become effective under the Securities Act by the 75th calendar day following the date of the Registration Rights Agreement (or, in the event of a “full review” by the Securities and Exchange Commission, the 105th calendar day following the Registration Rights Agreement). In addition, we agreed that, upon the registration statement being declared effective, we will use our best efforts to maintain the effectiveness of the registration statement until the date that (i) the selling stockholder has sold all of the shares of common stock

issuable upon the conversion of the shares of Series C Preferred Stock and the exercise of the Preferred Investment Options, respectively or (ii) such shares may be resold by the selling stockholder pursuant to Rule 144 of the Securities Act, without the requirement for us to be in compliance with the current public information required under such rule and without volume or manner-of-sale restriction.

Pursuant to the Registration Rights Agreement, we are registering the shares of common stock issuable upon the conversion of the shares of Series C Preferred Stock and the Preferred Investment Options in order to permit the selling stockholder to offer such shares for resale from time to time pursuant to this prospectus. The selling stockholder may also sell, transfer or otherwise dispose of all or a portion of its shares in transactions exempt from the registration requirements of the Securities Act, or pursuant to another effective registration statement covering those shares.

H.C. Wainwright & Co., LLC (“Wainwright”) served as our exclusive placement agent in connection with the July 2021 Private Placement, pursuant to that engagement letter, dated as of July 6, 2021, by and between us and Wainwright (as amended on July 9, 2021, the “Engagement Letter”). Pursuant to the Engagement Letter, we paid Wainwright (i) a total cash fee equal to 6.0% of the gross proceeds received from the purchaser who purchased securities in the July 2021 Private Placement and concurrent registered direct offering; (ii) \$75,000 for non-accountable expenses, and (iii) \$6,600 for escrow fees. In addition, we have agreed to pay Wainwright a cash fee equal to 6.0% of the gross proceeds received by us in connection with any exercises of the Preferred Investment Options in the Private Placement.

Relationships with the Selling Stockholder

Except as described above under “—Private Placement of Series C Preferred Stock and Preferred Investment Options”, the selling stockholder has not, nor within the past three years has had, any position, office or other material relationship with us.

Information About Selling Stockholder Offering

The shares of common stock being offered by the selling stockholder are those previously issued to the selling stockholder, and those issuable to the selling stockholder upon conversion of the Series C Preferred Stock or exercise of the Preferred Investment Options. For additional information regarding the issuances of the Series C Preferred Stock and Preferred Investment Options, see “Private Placement of Series C Preferred Stock and Preferred Investment Options” above. We are registering the Registrable Securities in order to permit the selling stockholder to offer such Registrable Securities for resale from time to time. Except for the ownership of the shares of common stock, the Series C Preferred Stock and the Preferred Investment Options, the selling stockholder has not had any material relationship with us within the past three years.

The table below lists the selling stockholder and other information regarding the beneficial ownership of the shares of common stock by the selling stockholder. The second column lists the number of shares of common stock beneficially owned by the selling stockholder, based on its ownership of the shares of common stock, shares of Series C Preferred Stock and Preferred Investment Options, as of March 22, 2022, assuming conversion or exercise, as applicable, of the Series C Preferred Stock and Preferred Investment Options held by the selling stockholder on that date, without regard to any limitations on conversions or exercises. The third column lists the shares of common stock being offered by this prospectus by the selling stockholder.

In accordance with the terms of the Registration Rights Agreement with the selling stockholder, this prospectus generally covers the resale of the sum of the maximum number of shares of common stock issued or issuable to the selling stockholder upon conversion of the Series C Preferred Stock or exercise of the Preferred Investment Options, in each case as described in the “Private Placement of Series C Preferred Stock and Preferred Investment Options” above, determined as if such securities were converted or exercised in full, each as of the trading day immediately preceding the applicable date of determination, and all subject to adjustment as provided in the Registration Rights Agreement, without regard to any limitations on the conversion or exercise thereof. The fourth column assumes the sale of all of the shares of common stock offered by the selling stockholder pursuant to this prospectus.

Under the terms of the Series C Preferred Stock and the Preferred Investment Options, the selling stockholder may not convert or exercise such securities to the extent such conversion or exercise would cause such selling stockholder, together with its affiliates and attribution parties, to beneficially own a number of shares of common stock which would exceed 9.99% of our then outstanding common stock following such conversion or exercise, excluding for purposes of such determination shares of common stock issuable upon conversion or exercise of such securities which have not been converted or exercised. The number of shares in the second column does not reflect this limitation. The selling stockholder may sell all, some or none of its shares in this offering. See “Plan of Distribution” below.

The percentages in the following table reflect the shares of common stock beneficially owned by the selling stockholder as a percentage of the total number of shares of common stock outstanding as of March 22, 2022. As of such date, 38,801,442 shares of common stock were outstanding.

Name of Selling Stockholder	Number of shares of Common Stock Owned Prior to Offering	Maximum Number of shares of Common Stock to be Sold Pursuant to this Prospectus	Number of shares of Common Stock Owned After Offering	Percentage of Common Stock Owned After Offering
Armistice Capital Master Fund Ltd.(1)	20,727,274	(2) 20,727,274	-	- %

(1) The shares are directly held by Armistice Capital Master Fund Ltd., a Cayman Islands exempted company (the “Master Fund”), and may be deemed to be indirectly beneficially owned by: (i) Armistice Capital, LLC (“Armistice Capital”), as the investment manager of the Master Fund; and (ii) Steven Boyd, as the Managing Member of Armistice Capital. Armistice Capital and Steven Boyd disclaim beneficial ownership of the securities except to the extent of their respective pecuniary interests therein. The Master Fund’s address is c/o Armistice Capital, LLC, 510 Madison Avenue, 7th Floor, New York, NY 10022. The Master Fund may not convert the Series C Preferred Stock or exercise the Preferred Investment Options to the extent such conversion or exercise would cause the Master Fund, together with its affiliates and attribution parties, to beneficially own a number of shares of common stock which would exceed 9.99% of our then outstanding common stock following such conversion or exercise, excluding for purposes of such determination shares of common stock issuable upon conversion or exercise of such securities which have not been so converted or exercised.

(2) Represents (i) up to an aggregate of 9,363,637 shares of common stock issuable upon the conversion of 8,240 shares of Series C Preferred Stock and (ii) up to an aggregate of 11,363,637 shares of common stock issuable upon the exercise of the Preferred Investment Options.

DESCRIPTION OF SECURITIES TO BE REGISTERED

As of March 22, 2022, our authorized capital stock consisted of 62,393,940 shares of common stock, \$0.001 par value per share, of which 38,801,442 shares were outstanding and 2,831,967 shares were reserved for the issuance of outstanding option and warrants, and 833,333 shares of preferred stock, \$0.01 par value per share, of which 50,000 shares and 8,240 shares were designated as Series B Junior Participating Preferred Stock (the “Series B Preferred Stock”) and Series C Preferred Stock, respectively. We have reserved all of the shares of our Series B Preferred Stock for issuance upon the exercise of the rights under our Shareholder Protection Rights Agreement, described below.

The following summary of certain provisions of our common stock does not purport to be complete. You should refer to our Certificate of Incorporation and our amended and restated by-laws (the “By-Laws”), which are filed with or incorporated by reference in the registration statement relating to this offering filed by us with the SEC. The summary below is also qualified by reference to the provisions of applicable Delaware corporation law.

Common Stock

Holders of our common stock are entitled to one vote per share on matters on which our stockholders vote, including with respect to the election of directors. Holders of common stock are entitled to receive dividends, if declared by our board of directors (the “Board”), out of funds that we may legally use to pay dividends. If we liquidate or dissolve, holders of common stock are entitled to share ratably in our assets once our debts and any liquidation preference owed to holders of any then-outstanding preferred stock are paid. All shares of common stock that are outstanding as of the date of this prospectus supplement are, and all shares we are selling in this offering, upon their issuance and sale, will be, fully-paid and nonassessable. Holders of our common stock have no preemptive, conversion or subscription rights, and there are no redemption or sinking fund provisions with respect to our common stock.

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Anti-Takeover Measures

Delaware Law

Section 203 of the General Corporation Law of the State of Delaware is applicable to takeovers of certain Delaware corporations, including us. Subject to exceptions enumerated in Section 203, Section 203 provides that a corporation shall not engage in any business combination with any “interested stockholder” for a three-year period following the date that the stockholder becomes an interested stockholder unless:

- prior to that date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, though some shares may be excluded from the calculation; or
- on or subsequent to that date, the business combination is approved by the board of directors of the corporation and by the affirmative votes of holders of at least two-thirds of the outstanding voting stock that is not owned by the interested stockholder.

Except as specified in Section 203, an interested stockholder is generally defined to include any person who, together with any affiliates or associates of that person, beneficially owns, directly or indirectly, 15% or more of the outstanding voting stock of the corporation, or is an affiliate or associate of the corporation and was the owner of 15% or more of the outstanding voting stock of the corporation, any time within three years immediately prior to the relevant date. Under certain circumstances, Section 203 makes it more difficult for an interested stockholder to effect various business combinations with a corporation for a three-year period, although the stockholders may elect not to be governed by this section, by adopting an amendment to our Certificate of Incorporation or By-Laws, effective 12 months after adoption. Our Certificate of Incorporation and By-Laws do not opt out from the restrictions imposed under Section 203. We anticipate that the provisions of Section 203 may encourage companies interested in acquiring us to negotiate in advance with the Board because the stockholder approval requirement would be avoided if a majority of the directors then in office excluding an interested stockholder approve either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder. These

provisions may have the effect of deterring hostile takeovers or delaying changes in control, which could depress the market price of our common stock and deprive stockholders of opportunities to realize a premium on shares of common stock held by them.

Certificate of Incorporation and By-Law Provisions

In addition to our Board's ability to issue shares of preferred stock, our Certificate of Incorporation and By-Laws contain the following provisions that may have the effect of discouraging unsolicited acquisition proposals:

- our By-Laws classify the Board into three classes with staggered three-year terms;
- under our By-Laws, our Board may enlarge the size of the Board and fill the vacancies;
- our By-Laws provide that a stockholder may not nominate candidates for the Board at any annual or special meeting unless that stockholder notifies us of its intention a specified period in advance and provides us with certain required information;
- stockholders who wish to bring business before the stockholders at our annual meeting must provide advance notice;
- Our By-Laws provide that stockholders may only act by written consent in lieu of a meeting if such consent is unanimous; and
- our By-Laws provide that special meetings of stockholders may only be called by our Board or by an officer so instructed by our Board.

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Our By-Laws also provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware will be the sole and exclusive forum for:

- any derivative action or proceeding brought on our behalf;
- any action asserting a claim of breach of a fiduciary duty owed by any director, officer or other employee of the company to us or our stockholders;
- any action asserting a claim arising pursuant to any provision of the General Corporation Law of the State of Delaware; or
- any action asserting a claim governed by the internal affairs doctrine.
- Our By-Laws further provide that any person or entity purchasing or otherwise acquiring any interest in shares of capital stock of the company is deemed to have notice of and consented to the foregoing provision.

Shareholder Protection Rights Agreement

On December 13, 2019, the Board authorized and declared a dividend of one right (a “Right”) for each of our issued and outstanding shares of common stock. The dividend was paid to the stockholders of record at the close of business on December 23, 2019. Each Right entitled the registered holder, subject to the terms of the Original Rights Agreement (as defined below), to purchase from us one one-thousandth of a share of our Series B Preferred Stock, par value \$0.01 per share, at a price of \$5.00, subject to certain adjustments. The description and terms of the Rights were set forth in the Rights Agreement, dated as of December 13, 2019 (the “Original Rights Agreement”), by and between us and American Stock Transfer & Trust Company, LLC, as Rights Agent.

On November 12, 2020, the Board approved an amendment and restatement of the Original Rights Agreement (as amended and restated, the “Amended and Restated Rights Agreement”) to effect certain changes to the Original Rights Agreement, including (i) reducing the duration to a term of three years, subject to certain earlier expiration as described in more detail below, and (ii) lowering the beneficial ownership threshold at which a person or group of persons becomes an Acquiring Person (as defined below) to 4.95% or more of the Company’s outstanding shares of common stock, subject to certain exceptions. The Amended and Restated Rights Agreement is designed to discourage (i) any person or group of persons from acquiring beneficial ownership of more than 4.95% of our shares of common stock and (ii) any existing stockholder currently beneficially holding 4.95% or more of our shares of common stock from acquiring additional shares of our common stock.

The purpose of the Amended and Restated Rights Agreement is to protect value by preserving our ability to utilize certain net operating losses and other tax attributes (collectively, the “Tax Benefits”) to offset potential future income tax obligations. Our ability to use these Tax Benefits would be substantially limited if we experience an “ownership change,” as such term is defined in Section 382 of the Internal Revenue Code of 1986, as amended (the “Tax Code”). A corporation generally will experience an ownership change if the percentage of the corporation’s stock owned by its “5-percent shareholders,” as defined in Section 382 of the Tax Code, increases by more than 50 percentage points over their lowest ownership percentage within a rolling three-year period. The Amended and Restated Rights Agreement is intended to reduce our likelihood of experiencing an ownership change under Section 382 of the Tax Code. The Rights are only exercisable upon the occurrence of certain triggering events described in the Amended and Restated Rights Agreement.

Transfer Agent

The transfer agent for our common stock is American Stock Transfer & Trust Company, located at 6201 15th Ave, Brooklyn, New York 11219

PLAN OF DISTRIBUTION

The selling stockholder of the securities and any of its pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their securities covered hereby on any stock exchange, market or trading facility on which the securities are traded or in private transactions. These sales may be at fixed or negotiated prices. The selling stockholder may use any one or more of the following methods when selling securities:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;

- privately negotiated transactions;
- settlement of short sales;
- in transactions through broker-dealers that agree with the selling stockholder to sell a specified number of such securities at a stipulated price per security;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law.

The selling stockholder may also sell securities under Rule 144 or any other exemption from registration under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the selling stockholder may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholder (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2440; and in the case of a principal transaction a markup or markdown in compliance with FINRA IM-2440.

In connection with the sale of the securities or interests therein, the selling stockholder may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the securities in the course of hedging the positions they assume. The selling stockholder may also sell securities short and deliver these securities to close out its short positions, or loan or pledge the securities to broker-dealers that in turn may sell these securities. The selling stockholder may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of securities offered by this prospectus, which securities such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The selling stockholder and any broker-dealers or agents that are involved in selling the securities may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. The selling stockholder has informed us that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities.

We are required to pay certain fees and expenses incurred by us incident to the registration of the securities. We have agreed to indemnify the selling stockholder against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

We agreed to keep this prospectus effective until the earlier of (i) the date on which the securities may be resold by the selling stockholder without registration and without regard to any volume or manner-of-sale limitations by reason of Rule 144, without the requirement for us to be in compliance with the current public information under Rule 144 under the Securities Act or any other rule of similar effect or (ii) all of the securities have been sold pursuant to this prospectus or Rule 144 under the Securities Act or any other rule of similar effect. The resale securities will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale securities covered hereby may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), any person engaged in the distribution of the resale securities may not simultaneously engage in market making activities with respect to the common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the selling stockholder will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of the common stock by the selling stockholder or any other person. We will make copies of this prospectus available to the selling stockholder and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

LEGAL MATTERS

The validity of the securities offered by this prospectus will be passed upon by Haynes and Boone, LLP, New York, New York.

EXPERTS

The financial statements as of December 31, 2021 and 2020 and for each of the two years in the period ended December 31, 2021 incorporated by reference in this prospectus have been so incorporated in reliance on the report of Weinberg & Company, an independent registered public accounting firm, incorporated herein by reference, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the informational requirements of the Exchange Act, and in accordance therewith file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission. The Securities and Exchange Commission maintains a website that contains reports, proxy and information statements and other information regarding registrants that file electronically with the Securities and Exchange Commission. The address of the Securities and Exchange Commission’s website is www.sec.gov.

We make available free of charge on or through our website at www.cytrx.com, our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act, as soon as reasonably practicable after we electronically file such material with or otherwise furnish it to the Securities and Exchange Commission.

We have filed with the Securities and Exchange Commission a registration statement under the Securities Act, relating to the offering of these securities. The registration statement, including the attached exhibits, contains additional relevant information about us and the securities. This prospectus does not contain all of the information set forth in the registration statement. You can obtain a copy of the registration statement for free at www.sec.gov. The registration statement and the documents referred to below under “Incorporation of Certain Information By Reference” are also available on our website, www.cytrx.com.

We have not incorporated by reference into this prospectus the information on our website, and you should not consider it to be a part of this prospectus.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The Securities and Exchange Commission allows us to “incorporate by reference” the information we have filed with it, which means that we can disclose important information to you by referring you to those documents. The information we incorporate by reference is an important part of this prospectus, and later information that we file with the Securities and Exchange Commission will automatically update and supersede this information. We incorporate by reference the documents listed below and any future documents (excluding information furnished pursuant to Items 2.02 and 7.01 of Form 8-K) we file with the Securities and Exchange Commission pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, subsequent to the date of this prospectus and prior to the termination of the offering:

- Our Annual Report on Form 10-K for the year ended December 31, 2021, filed with the Securities and Exchange Commission on March 23, 2022;
- Our Current Reports on Form 8-K, filed with the Securities and Exchange Commission on January 4, 2022, March 10, 2022 and March 16, 2022; and
- The description of our securities as described in our Registration Statement on Form 8-A filed with the Securities and Exchange Commission on March 17, 1987 (File No. 000-15327), as amended and supplemented by the description of our common stock contained in Exhibit 4.4 to our Annual Report on Form 10-K for the year ended December 31, 2021, filed with the SEC on March 23, 2022, including any amendment or reports filed for the purpose of updating such description.

All filings filed by us pursuant to the Exchange Act after the date of the initial filing of this registration statement and prior to the effectiveness of such registration statement (excluding information furnished pursuant to Items 2.02 and 7.01 of Form 8-K) shall also be deemed to be incorporated by reference into the prospectus.

You should rely only on the information incorporated by reference or provided in this prospectus. We have not authorized anyone else to provide you with different information. Any statement contained in a document incorporated by reference into this prospectus will be deemed to be modified or superseded for the purposes of this prospectus to the extent that a later statement contained in this prospectus or in any other document incorporated by reference into this prospectus modifies or supersedes the earlier statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus. You should not assume that the information in this prospectus is accurate as of any date other than the date of this prospectus or the date of the documents incorporated by reference in this prospectus.

We will provide without charge to each person to whom a copy of this prospectus is delivered, upon written or oral request, a copy of any or all of the reports or documents that have been incorporated by reference in this prospectus but not delivered with this prospectus (other than an exhibit to these filings, unless we have specifically incorporated that exhibit by reference in this prospectus). Any such request should be addressed to us at:

CytRx Corporation
Attention: Corporate Secretary
11726 San Vicente Boulevard, Suite 650
Los Angeles, California 90049
(310) 826-5648

You may also access the documents incorporated by reference in this prospectus through our website at www.cytrx.com. Except for the specific incorporated documents listed above, no information available on or through our website shall be deemed to be incorporated in this prospectus or the registration statement of which it forms a part.

20,727,274 SHARES OF COMMON STOCK UNDERLYING
SHARES OF SERIES C PREFERRED STOCK AND CERTAIN PREFERRED INVESTMENT OPTIONS

PROSPECTUS

March [25], 2022