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

AMENDMENT NO. 1  
TO

**FORM S-3**

REGISTRATION STATEMENT  
*UNDER*  
*THE SECURITIES ACT OF 1933*

**CYTRX CORPORATION**

(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction of  
incorporation or organization)

58-1642740  
(I.R.S. Employer  
Identification No.)

CytRx Corporation  
11726 San Vicente Boulevard, Suite 650  
Los Angeles, California 90049

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

Steven A. Kriegsman  
Chairman and Chief Executive Officer  
CytRx Corporation  
11726 San Vicente Boulevard, Suite 650  
Los Angeles, California 90049  
(310) 826-5648

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

*With a copy to:*

Joan S. Guilfoyle, Esq.  
Loeb & Loeb LLP  
901 New York Avenue, NW  
Washington, DC 20001

**Approximate date of commencement of proposed sale to public:** From time to time after the effective date of this registration statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. [ ]

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. [X]

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

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

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. [ ]

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. [ ]

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

Large accelerated filer [ ] Accelerated filer [ ]  
 Non-accelerated filer [ ] Smaller reporting company[X]  
 Emerging growth company [ ]

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

### CALCULATION OF REGISTRATION FEE

<b>Title of each class of securities to be registered</b>	<b>Amount to be registered<sup>(1)</sup></b>	<b>Proposed maximum offering price per security<sup>(2)</sup></b>	<b>Proposed maximum aggregate offering price<sup>(2)</sup></b>	<b>Amount of registration fee<sup>(3)</sup></b>
Common stock, par value \$0.001 per share <sup>(4)</sup>	2,000,000 <sup>(3)</sup>	\$ 2.07	\$ 4,140,000	\$ 451.67

(1) Pursuant to Rule 416 under the Securities Act of 1933, this registration statement also registers such indeterminate amounts of securities as may be issued upon conversion of, or in exchange for, the securities registered hereunder and such indeterminate number of shares of common stock and preferred stock as may be issued from time to time upon conversion or exchange as a result of stock splits, stock dividends or similar transactions.

(2) Estimated only for purposes of calculating the registration fee pursuant to Rule 457(c) based on the average of the high and low sales prices of \$2.07 as reported on the OTC Markets on April 21, 2021.

(3) Previously paid.

(4) Each share of common stock will be accompanied by one Series B Junior Participating Preferred Stock Purchase Right that trades with the common stock. The value, if any, attributable to this right is reflected in the market price of common stock. Prior to the occurrence of certain events, none of which has occurred as of the date of this registration statement, the rights will not be exercisable or evidenced separately from the common stock.

**THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(A) OF THE SECURITIES ACT OF 1933 OR UNTIL THIS REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(A), MAY DETERMINE.**

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

**SUBJECT TO COMPLETION, MAY 14, 2021**

**PROSPECTUS**

**2,000,000 Shares**



**Common Stock**

We may offer and sell from time to time up to 2,000,000 in the aggregate of shares of our common stock. Each share of our common stock to be offered and sold is accompanied by one Series B Junior Participating Preferred Stock Purchase Right that trades with our common stock.

We will provide the specific terms of these offers and sales in supplements to this prospectus. This prospectus may not be used to sell securities unless accompanied by a prospectus supplement. You should read this prospectus and the related prospectus supplement carefully before you invest. We may offer securities directly to investors or through agents, underwriters or dealers. If any agents, underwriters or dealers are involved in the sale of any of our securities, their names and any applicable purchase prices, fees, commissions or discount arrangements will be set forth in the prospectus supplement.

Our common stock is traded on The OTC Markets under the symbol "CYTR." On May 13, 2021, the closing price of our common stock as reported on The OTC Markets was \$1.17 per share. The aggregate market value of our outstanding common stock held by non-affiliates as of the date of this prospectus is approximately \$38.5 million, calculated based upon 32,902,581 shares of outstanding common stock held by non-affiliates and a per share price of \$1.17, the closing sale price of our common stock as reported on The OTC Markets on May 13, 2021.

**An investment in our common stock involves significant risks. Before purchasing any shares, you should consider carefully the risks referred to under "Risk Factors" on page 6 of this prospectus and in the prospectus supplement.**

**NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED THESE SECURITIES OR DETERMINED THAT**

**THIS PROSPECTUS IS COMPLETE OR ACCURATE. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.**

The date of this prospectus is \_\_\_\_\_, 2021

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**TABLE OF CONTENTS**

	<b><u>Page</u></b>
<a href="#"><u>ABOUT THIS PROSPECTUS</u></a>	1
<a href="#"><u>NOTE ON FORWARD-LOOKING STATEMENTS</u></a>	1
<a href="#"><u>INDUSTRY DATA</u></a>	2
<a href="#"><u>TRADEMARKS</u></a>	2
<a href="#"><u>ABOUT CYTRX</u></a>	3
<a href="#"><u>RISK FACTORS</u></a>	6
<a href="#"><u>USE OF PROCEEDS</u></a>	7
<a href="#"><u>DIVIDEND POLICY</u></a>	7
<a href="#"><u>DESCRIPTION OF COMMON STOCK</u></a>	7
<a href="#"><u>PLAN OF DISTRIBUTION</u></a>	9
<a href="#"><u>WHERE YOU CAN FIND MORE INFORMATION</u></a>	11
<a href="#"><u>INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE</u></a>	11
<a href="#"><u>LEGAL MATTERS</u></a>	11
<a href="#"><u>EXPERTS</u></a>	11

**ABOUT THIS PROSPECTUS**

This prospectus is part of a registration statement (Reg. No. 333-255431) utilizing the “shelf registration” process that we filed with the Securities and Exchange Commission, or the SEC, to permit us to offer and sell the securities described in this prospectus in one or more transactions. The plan of distribution of the securities is described in this prospectus under the heading “Plan of Distribution.”

As permitted by the rules and regulations of the SEC, the registration statement filed by us includes additional information not contained in this prospectus. You may read the registration statement and the other reports we file with the SEC at the SEC’s web site or at the SEC’s offices described below under the heading “Where You Can Find More Information .”

This prospectus provides you with a general description of the securities we may offer. Each time securities are sold, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus. You should read both this prospectus and the prospectus supplement, together with additional information described in this prospectus under the heading “Where You Can Find More Information.”

You should rely only on the information provided in this prospectus and in the prospectus supplement, including any information incorporated by reference. For more details on information incorporated herein by reference, you should review the discussion contained under the heading “Incorporation of Certain Documents by Reference.” We have not authorized anyone to provide you with information different from that contained or incorporated by reference in this prospectus and in the prospectus supplement. We are offering the securities only in jurisdictions where offers are permitted. You should not assume that the information in this prospectus or the prospectus supplement is accurate at any date other than the date indicated on the cover page of these documents.

### **NOTE ON 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.

### **INDUSTRY DATA**

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 subject to a high degree of uncertainty and risk due to a variety of factors, including those referred to under “Risk Factors”

below in this prospectus. These and other factors could cause our future performance to differ materially from our assumptions and estimates.

## TRADEMARKS

CytRx™, LADR™ and ACDX™ are some of our trademarks used in this prospectus. This prospectus also includes trademarks, trade names and service marks that are the property of other organizations. Solely for convenience, trademarks and trade names referred to in this prospectus sometimes appear without the ® and ™ symbols, but those references are not intended to indicate 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 trade names.

2

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## ABOUT CYTRX

CytRx Corporation (“CytRx”, “we”, “our”) is a biopharmaceutical research and development company specializing in oncology and rare diseases. Our 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 preclinical studies, stability, and manufacturing feasibility. In 2018, additional animal efficacy and toxicology testing of these lead candidates was conducted. 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.

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>. We do not incorporate by reference into this Annual Report the information on, or accessible through, our website, and you should not consider it as part of this Annual Report.

### LADR Drug Discovery Platform and Centurion

Centurion’s LADR™ (Linker Activated Drug Release) technology platform is a discovery engine combining our expertise in linker chemistry and albumin biology to create a pipeline of anti-cancer molecules that will avoid unacceptable systemic toxicity while delivering highly potent agents directly to the tumor. They have created a “toolbox” of linker technologies that have the ability to significantly increase the therapeutic index of ultra-high potency drugs (10-1,000 times more potent than traditional cytotoxins) by controlling the release of the drug payloads and improving drug-like properties.

Centurion’s efforts were focused on two classes of ultra-high potency albumin-binding drug conjugates. 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. These 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.

CytRx and Centurion have been working on identifying partnership opportunities for LADR™ ultra-high potency drug conjugates and its albumin companion diagnostic. However, no partnerships or any source of financing has become available after two years of effort.

### **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, our modified version of the widely used cytotoxin agent, doxorubicin. Aldoxorubicin combines the agent doxorubicin with a novel linker-molecule that binds specifically to albumin in the blood to allow 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 has recently merged with NantKwest, Inc.). 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, two-cohort, open-label registrational-intent study for first-line and second-line treatment of locally advanced or metastatic pancreatic cancer, which includes aldoxorubicin.

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 is for patients with advanced soft tissue sarcomas (STS). ImmunityBio lists a randomized Phase 2 and a randomized Phase 3 study, as well as an aldoxorubicin and ifosfamide Phase 1/2 study in its solid tumor platform and is currently reviewing options in 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.

In addition to STS, ImmunityBio has expanded aldoxorubicin's use by combining it with immunotherapies and cell-based treatments and is currently in late-stage clinical development in advanced and metastatic pancreatic cancer, in glioblastoma, and in triple negative breast cancer. ImmunityBio has initiated a phase 2 registrational-intent study in metastatic pancreatic cancer.

### **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 (USD) 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. 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 have submitted a New Drug Application (NDA) with the U.S. Food and Drug Administration (FDA), which is currently under Priority Review by the U.S. Food and Drug Administration ("FDA") with a target action date of June 17, 2021. It also submitted a Marketing Authorization Application (MAA) with the European Medicines Agency (EMA). They have established an Early Access Program in the U.S. as well as other select European countries. Orphazyme has also received FDA Breakthrough Therapy Designation for arimoclomol for NPC. Orphazyme recently announced its intention that arimoclomol will be marketed globally under the tradename MIPLYFFA™.

### **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, 2020 and 2019 no amounts were due under this Agreement.

### **Research and Development**

Expenditures for research and development activities related to continuing operations were \$0.8 million in 2020 and \$0.4 million for the year ended December 31, 2019, or approximately 12% and 5%, 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, 2020 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 April 12, 2021, we have three pending U.S. patent applications and forty-three pending foreign patent applications covering our LADR<sup>TM</sup>-related technology including LADR-7, LADR-8, LADR-9 and LADR-10. The un-extended patent term of patents that issue covering our LADR<sup>TM</sup>-related technology is between June 2036 and November 2038. We also have one pending U.S. patent application and thirteen pending foreign patent applications covering our albumin companion diagnostic (ACDx<sup>TM</sup>). The un-extended patent term of patents that issue covering our ACDx<sup>TM</sup> is July 2039. The patents and patent applications covering our LADR<sup>TM</sup>-related technology, and ACDx<sup>TM</sup> are assigned to Centurion BioPharma Corporation. 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, six granted foreign patents, and seven pending foreign patent applications covering aldoxorubicin and related technologies. Patents and applications that cover aldoxorubicin formulations and methods of treating cancer (including glioblastoma) using aldoxorubicin have un-extended patent terms expiring between December 2033 and June 2034.

## **LICENSE AGREEMENTS**

### **Aldoxorubicin**

We are the licensee of patent rights held by KTB for the worldwide development and commercialization of doxorubicin 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. 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.

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 doxorubicin 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 doxorubicin, 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 A/S.

## **RISK FACTORS**

Investing in our securities involves significant risks, including those set forth under the caption "Risk Factors" in our most recent Annual Report on Form 10-K incorporated herein by reference. The prospectus supplement relating to a particular offering will contain a discussion of risks applicable to an investment in the securities offered. Prior to making a decision about investing in our securities, you should carefully consider the specific factors discussed under the heading "Risk Factors" in the applicable prospectus supplement together with all of the other information contained in the prospectus supplement or appearing or incorporated by reference in this prospectus.

## **USE OF PROCEEDS**

Unless we state otherwise in the accompanying prospectus supplement, we intend to use the net proceeds from the sale of securities offered by this prospectus for working capital and general corporate purposes, including the clinical trials of our product candidates. General corporate purposes also may include funding of capital

expenditures, payments in connection with possible future acquisitions and strategic investments and repayment of future indebtedness.

We have not determined the amounts we plan to spend on any of the areas listed above or the timing of these expenditures. As a result, our management will have broad discretion to allocate the net proceeds from this offering. Pending application of the net proceeds as described above, we expect to invest the net proceeds in short-term, interest-bearing, investment-grade securities pursuant to our investment policy.

## **DIVIDEND POLICY**

Our board of directors sets our dividend policy. We have never paid any cash dividends on our common stock and do not intend to declare cash dividends on our common stock in the foreseeable future. We currently intend to retain all available funds and any future earnings for use in the operation and expansion of our business, but we may determine in the future to declare or pay cash dividends on our common stock. Any future determination as to the declaration and payment of dividends will be at the discretion of our board of directors and will be dependent upon our results of operations and cash flows, our financial position and capital requirements, general business conditions, legal, tax, regulatory and any contractual restrictions on the payment of dividends, and any other factors our board of directors deems relevant.

## **DESCRIPTION OF COMMON STOCK**

As of May 13, 2021, our authorized capital stock consisted of 41,666,666 shares of common stock, \$0.001 par value per share, of which 36,480,038 shares were outstanding and 3,170,437 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 were designated as Series B Junior Participating Preferred Stock.

We have reserved all of the shares of our Series B Junior Participating 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 amended and restated certificate of incorporation and our restated bylaws, 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, out of funds that we may legally use to pay dividends. See the section of this prospectus entitled “Dividend Policy” for further information. 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.

### **Anti-Takeover Measures**

#### ***Delaware Law***

Section 203 of the Delaware General Corporation Law 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 the certificate of incorporation or by-laws, effective 12 months after adoption. Our amended and restated 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 the board of directors' ability to issue shares of preferred stock, our amended and restated certificate of incorporation and restated by-laws contain the following provisions that may have the effect of discouraging unsolicited acquisition proposals:

- our restated by-laws classify the board of directors into three classes with staggered three-year terms;
- under our restated by-laws, our board of directors may enlarge the size of the board and fill the vacancies;
- our restated by-laws provide that a stockholder may not nominate candidates for the board of directors 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 restated by-laws provide that stockholders may only act by written consent in lieu of a meeting if such consent is unanimous; and
- our restated by-laws provide that special meetings of stockholders may only be called by our board of directors or by an officer so instructed by our board.

Our restated 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 Delaware General Corporation Law; or

- any action asserting a claim governed by the internal affairs doctrine.
- Our restated 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 of Directors of the Company, authorized and declared a dividend of one right (a “Right”) for each of the Company’s 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 the Company one one-thousandth of a share of the Company’s Series B Junior Participating Preferred Stock, par value \$0.01 per share (the “Preferred Stock”), at a price of \$5.00 (the “Purchase Price”), 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 the Company and American Stock Transfer & Trust Company, LLC, as Rights Agent (the “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 the Company’s shares of common stock and (ii) any existing stockholder currently beneficially holding 4.95% or more of the Company’s shares of common stock from acquiring additional shares of the Company’s common stock.

The purpose of the Amended and Restated Rights Agreement is to protect value by preserving the Company’s ability to utilize its net operating losses and certain other tax attributes (collectively, the “Tax Benefits”) to offset potential future income tax obligations. The Company’s ability to use its Tax Benefits would be substantially limited if it experiences 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 the likelihood the Company would experience 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, 40 Wall Street, New York, New York 10005.

### PLAN OF DISTRIBUTION

We may sell the securities being offered hereby in one or more of the following ways from time to time:

- through agents to the public or to investors;
- to one or more underwriters for resale to the public or to investors;
- in “at the market” offerings, within the meaning of Rule 415(a)(4) of the Securities Act of 1933, as amended, or the Securities Act, to or through a market maker or into an existing trading market, on an exchange or otherwise;
- directly to investors; or
- through a combination of these methods of sale.

We will set forth in a prospectus supplement the terms of an offering of shares of our securities, including.

- the name or names of any agents or underwriters;
- the purchase price of the securities being offered and the proceeds we will receive from the sale;
- any over-allotment options under which underwriters may purchase additional securities from us;
- any agency fees or underwriting discounts and other items constituting agents’ or underwriters’ compensation;
- the public offering price; and
- any discounts or concessions allowed or re-allowed or paid to dealers.

We may distribute the securities from time to time in one or more transactions;

- at a fixed price or prices, which may be changed;
- at market prices prevailing at the time of sale;
- at prices related to such prevailing market prices; or
- at negotiated prices.

We may also, from time to time, authorize dealers, acting as our agents, to offer and sell securities upon the terms and conditions set forth in the applicable prospectus supplement. We, or the purchasers of securities for whom the underwriters may act as agents, may compensate underwriters in the Form of underwriting discounts or commissions, in connection with the sale of securities. Underwriters may sell the securities to or through dealers, and those dealers may receive compensation in the Form of discounts, concessions or commissions from the underwriters or commissions from the purchasers for whom they may act as agent. Unless otherwise indicated in a prospectus

supplement, an agent will be acting on a “best efforts” basis and a dealer will purchase securities as a principal, and may then resell the common stock at varying prices to be determined by the dealer.

We will describe in the applicable prospectus supplement any compensation we will pay to underwriters or agents in connection with the offering of securities, and any discounts, concessions or commissions allowed by underwriters to participating dealers. The dealers and agents participating in the distribution of securities may be deemed to be underwriters, and any discounts and commissions received by them and any profit realized by them on resale of the securities may be deemed to be underwriting discounts and commissions. We may enter into agreements to indemnify underwriters, dealers and agents against certain civil liabilities, including liabilities under the Securities Act and to reimburse these persons for certain expenses. We may grant underwriters who participate in the distribution of securities we are offering under this prospectus an option to purchase additional shares to cover over-allotments, if any, in connection with the distribution.

To facilitate the offering of securities, certain persons participating in the offering may engage in transactions that stabilize, maintain, or otherwise affect the price of the securities. This may include over-allotments or short sales of the securities, which involve the sale by persons participating in the offering of more securities than we sold to them. In these circumstances, these persons would cover such over-allotments or short positions by making purchases in the open market or by exercising their over-allotment option, if any. In addition, these persons may stabilize or maintain the price of the securities by bidding for or purchasing securities in the open market or by imposing penalty bids, whereby selling concessions allowed to dealers participating in the offering may be reclaimed if securities sold by them is repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of the securities at a level above that which might otherwise prevail in the open market. These transactions may be discontinued at any time.

Certain underwriters, dealers or agents and their associates may engage in transactions with and perform services for us in the ordinary course of our business.

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

We file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC’s website at <http://www.sec.gov>. The SEC’s website contains reports, proxy and information statements and other information regarding issuers such as us that file electronically with the SEC. You may also read and copy any document we file with the SEC at the SEC’s Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549, and may obtain copies of these documents at prescribed rates by writing to the SEC. Please call the SEC at 1-800-SEC-0330 for further information on the operation of its Public Reference Room.

Information about us is also available at our website at [www.cytrx.com](http://www.cytrx.com); however, information on our website is not incorporated into this prospectus and is not a part of this prospectus.

## **INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE**

The SEC 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 another document that we have filed separately with the SEC. You should read the information incorporated by reference because it is an important part of this prospectus. Any statement in a document we incorporate by reference into this prospectus will be considered to be modified or superseded to the extent a statement contained in this prospectus or any other subsequently filed document that is incorporated by reference into this prospectus modifies or supersedes that statement. The modified or superseded statement will not be considered to be a part of this prospectus, except as modified or superseded.

We incorporate by reference the following information or documents that we have filed with the SEC (excluding those portions of any document that are “furnished” and not “filed” in accordance with SEC rules):

- our Annual Report on [Form 10-K](#) for the year ended December 31, 2020 filed with the SEC on March 24, 2021;
- our Quarterly Report on Form 10-Q for the quarter ended March 31, 2021 filed with the SEC on May 13, 2021;
- our Current Report on [Form 8-K](#) dated January 5, 2021 filed with the SEC on January 8, 2021
- the description of our securities as described in our Registration Statement on Form 8-A filed under the Exchange Act on March 17, 1987 (File No. 000-15327), and any amendment or report filed for the purpose of updating any such description; and
- the description of our Series B Junior Participating Preferred Stock Purchase Rights as described in our Registration Statement on [Form 8-A/A](#) filed under the Exchange Act on November 17, 2020, and any amendment or report filed for the purpose of updating any such descriptions.

We also incorporate by reference all documents filed by us pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date on which we filed the registration statement of which this prospectus is a part and prior to the termination of this offering (excluding those portions of any document that are “furnished” and not “filed” in accordance with SEC rules).

Statements made in this prospectus or in any document incorporated by reference in this prospectus as to the contents of any contract or other document referred to herein or therein are not necessarily complete, and in each instance reference is made to the copy of such contract or other document filed as an exhibit to the documents incorporated by reference, each such statement being qualified in all material respects by such reference.

You may obtain a copy of the foregoing documents from us without charge by writing or calling us at the following address and telephone number: 11726 San Vicente Blvd., Suite 650 Los Angeles, California 90049, Attention: Corporate Secretary; (310)826-5648.

## LEGAL MATTERS

The validity of the securities being offered hereby has been passed upon for us by Loeb & Loeb LLP, Washington DC.

## EXPERTS

The financial statements as of December 31, 2020 and 2019 and for each of the two years in the period ended December 31, 2020 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.

## PROSPECTUS



2,000,000 Shares



The date of this prospectus is \_\_\_\_\_, 2021

## PART II

### INFORMATION NOT REQUIRED IN PROSPECTUS

#### ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

We estimate that the expenses incurred in connection with the distribution described in this registration statement will be as set forth below. We will bear all of such expenses.

SEC registration fee	\$	
Transfer agent fees and expenses		*
FINRA corporate filing fees		*
Accounting fees and expenses	\$	
Legal fees and expenses		*
Printing expenses		*
Miscellaneous		*
Total	\$	

\* Estimated expenses, if any, not presently known.

#### ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Section 102(b)(7) of the Delaware General Corporation Law authorizes a corporation in its certificate of incorporation to eliminate or limit personal liability of directors of the corporation for violations of the directors' fiduciary duty of care. However, directors remain liable for breaches of duties of loyalty, failing to act in good faith, engaging in intentional misconduct, knowingly violating a law, paying a dividend or approving a stock repurchase which was illegal under Delaware General Corporation Law Section 174 or obtaining an improper personal benefit. In addition, equitable remedies for breach of fiduciary duty of care, such as injunction or recession, are available.

Our amended and restated certificate of incorporation eliminates the personal liability of the members of our board of directors to the fullest extent permitted by law. Specifically, Article Eleven of our amended and restated certificate of incorporation provides as follows:

A director of the corporation shall not be personally liable to the corporation or its security holders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director's duty of loyalty to the corporation or its security holders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the Delaware General Corporation Law, or (iv) for any transaction from which the director derived any improper personal benefit. If the Delaware General Corporation Law is amended after approval by the security holders of this Article to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the corporation shall be eliminated or limited to the fullest extent permitted by the Delaware General Corporation Law as so amended.

Any repeal or modification of the foregoing paragraph by the security holders of the corporation shall not adversely affect any right or protection of a director of the corporation existing at the time of such repeal or modification.

In addition, our amended and restated certificate of incorporation and restated by-laws provide for indemnification of our officers and directors to the fullest extent permitted by law. In particular, Article Nine of our amended and restated certificate of incorporation provides as follows:

The corporation shall, to the fullest extent permitted by Section 145 of the General Corporation Law of the State of Delaware, as the same may be amended and supplemented, indemnify any and all persons whom it shall have power to indemnify under said section from and against any and all of the expenses, liabilities or other matters referred to in or covered by said section, and the indemnification provided for herein shall not be deemed exclusive of any other rights to which those indemnified may be entitled under any bylaw, agreement, vote of security holders or disinterested directors or otherwise, both as to action in his official capacity and as to action in another capacity while holding such office, and shall continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

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## II-1

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Section 145 of the Delaware General Corporation Law empowers a corporation to indemnify any person who was or is party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he is or was a director, officer or agent of the corporation or another enterprise if serving at the request of the corporation. Depending on the character of the proceeding, a corporation may indemnify against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding if the person indemnified acted in good faith in respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful. In the case of an action by or in the right of the corporation, no indemnification may be made with respect to any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine that despite the adjudication of liability such person is fairly and reasonably entitled to indemnity for such expenses which the court shall deem proper. Section 145 further provides that to the extent a director, officer, employee or agent of a corporation has been successful in the defense of any action, suit or proceeding referred to above or in the defense of any claim, issue or matter therein, he shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by him in connection therewith. Our restated by-laws permit us to purchase insurance on behalf of such person against any liability asserted against him and incurred by him in any such capacity, or arising out of his status as such, whether or not we would have the power to indemnify him against such liability under the foregoing provision of the restated by-laws.

We have entered into indemnification agreements with each of our directors and officers under which we agree, in effect, to indemnify them to the fullest extent permitted by Delaware law.

We also hold an insurance policy covering directors and officers under which the insurer agrees to pay, with some exclusions, for any claim made against our directors and officers for a wrongful act that they may become legally obligated to pay or for which we are required to indemnify our directors or officers.

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

## ITEM 16. EXHIBITS

The exhibits listed in the accompanying Exhibit Index are filed or incorporated by reference as part of this registration statement.

## **ITEM 17. UNDERTAKINGS**

(a) The undersigned registrant hereby undertakes:

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

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

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

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### II-2

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(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement; provided, however, that paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) of this section do not apply if the registration statement is on Form S-3 and the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Securities and Exchange Commission by the registrant pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a Form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

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

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

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

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

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

in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof; provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is a part of the registration statement will, as to a purchaser with a time of contract sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was a part of the registration statement or made in any such document immediately prior to such effective date.

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

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

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

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

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

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

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

## SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement on Form S-3 to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Los Angeles, State of California, on May 14, 2021.

CYTRX CORPORATION

By: /s/ Steven A. Kriegsman

Steven A. Kriegsman  
Chairman and Chief Executive Officer

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Steven A. Kriegsman as his true and lawful attorney-in-fact and agent, with full power of substitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement on Form S-3, and to sign any registration statement for the same offering covered by this registration statement that is to be effective upon filing pursuant to Rule 462(b) promulgated under the Securities Act of 1933, and all post-effective amendments thereto, and to file the same and all prospectus supplements, with all exhibits thereto and all documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Steven A. Kriegsman</u> Steven A. Kriegsman	Chairman of the Board and Chief Executive Officer (Principal Executive Officer)	May 14, 2021
<u>/s/ John Caloz</u> John Y. Caloz	Chief Financial Officer and Treasurer (Principal Financial and Accounting Officer)	May 14, 2021
<u>/s/ Lou Ignarro*</u> Louis J. Ignarro, Ph.D.	Director	May 14, 2021
<u>/s/ Earl Brien*</u> Earl W. Brien, M.D.	Director	May 14, 2021
<u>/s/ Joel Caldwell*</u> Joel Caldwell	Director	May 14, 2021

\*By: /s/ Steven A. Kriegsman  
Steven A. Kriegsman  
Attorney-in-fact

II-4

**EXHIBIT INDEX**

The following exhibits are filed herewith or incorporated herein by reference.

<u>Exhibit Number</u>	<u>Description</u>
1.1	Form of Underwriting Agreement.*

- 3.1 [Restated Certificate of Incorporation, as amended \(incorporated by reference to Exhibit 3.1 to the Registrant's Annual Report on Form 10-K filed on March 13, 2012\).](#)
- 3.2 [Certificate of Amendment of Restated Certificate of Incorporation \(incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on May 15, 2012\).](#)
- 3.3 [Certificate of Amendment of Restated Certificate of Incorporation \(incorporated by reference to Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on November 1, 2017\)](#)
- 3.4 [Restated By-Laws, as amended \(incorporated by reference to Exhibit 3.2 to the Registrant's Current Report on Form 8-K filed on November 17, 2020\).](#)
- 4.1 [Amended and Restated Rights Agreement dated November 16, 2020 between CytRx Corporation and American Stock Transfer & Trust Company as Rights Agent \(incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed November 17, 2020\).](#)
- 4.2 [Form of Common Stock Certificate \(incorporated by reference to Exhibit 4.1 to the Registrant's Current Report on Form 8-K filed on December 14, 2016\).](#)
- 5.1 [Opinion of Loeb & Loeb LLP](#)
- 23.1 [Consent of Loeb & Loeb LLP \(included in Exhibit 5.1\).](#)
- 23.2 [Consent Weinberg & Company](#)
- 24.1 [Power of Attorney \(included on page II-5\)](#)

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\* To be filed, if applicable, subsequent to the effectiveness of this registration statement (1) by an amendment to this registration statement or (2) as an exhibit to a Current Report on Form 8-K and incorporated herein by reference.

\*\* Filed herewith.

**Exhibit 23.2**

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the incorporation by reference in this Amendment No. 1 to the Registration Statement on Form S-3 of CytRx Corporation of our report dated March 24, 2021, with respect to the financial statements of CytRx Corporation as of December 31, 2020 and 2019, and for the years then ended, which appear in the Annual Report on Form 10-K of CytRx Corporation for the year ended December 31, 2020, filed with the Securities and Exchange Commission on March 24, 2021. We also consent to the reference to our firm under the caption "Experts" in the Prospectus.

Weinberg & Company, P.A.  
Los Angeles, California  
May 14, 2021

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10100 Santa Monica Blvd.   **Main** 310.282.2000  
Suite 2200                   **Fax** 310.282.2200  
Los Angeles, CA 90067

May 14, 2021

CytRx Corporation

11726 San Vicente Boulevard, Suite 650  
Los Angeles, California 90049

Ladies and Gentlemen:

We have acted as U.S. securities counsel for CytRx Corporation, a Delaware corporation (the “Company”), in connection with (A) the preparation and filing by the Company of the Form S-3 Registration Statement (including the prospectus constituting part thereof (the “Prospectus”)) to which this opinion letter has been filed as an exhibit (the “Registration Statement”), by the Company of 2,000,000 shares (the “Shares”) of common stock, par value \$0.001 per share (the “Common Stock”). The Shares may be offered and sold from time to time pursuant to Rule 415 under the Securities Act of 1933, as amended (the “Securities Act”), at which time it is contemplated that the Prospectus will be supplemented in the future by one or more supplements to the Prospectus (each, a “Prospectus Supplement”).

In connection with this opinion letter, we have examined the Registration Statement and originals or copies, certified or otherwise identified to our satisfaction, of such corporate records of the Company and other certificates and documents of officials of the Company, public officials and others as we have deemed appropriate for purposes of this letter. We have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, and the conformity to authentic original documents of all copies submitted to us as conformed and certified or reproduced copies.

Based upon the foregoing and subject to the assumptions, exceptions, qualifications and limitations set forth hereinafter, we are of the opinion that the Shares, upon issuance and delivery of certificates (or book-entry notation if uncertificated) for such Common Shares against payment therefor of lawful consideration, will be validly issued, fully paid and non-assessable.

In rendering the foregoing opinions, we have assumed that: (i) the Registration Statement, and any amendments thereto, shall have become effective under the Securities Act and will remain effective at the time of issuance of any Shares thereunder; (ii) a Prospectus Supplement describing each offering of Shares registered under the Registration Statement, to the extent required by applicable law and relevant rules and regulations of the Securities and Exchange Commission (the “Commission”), will be timely filed with the Commission; (iii) the Company will issue and deliver the Shares in the manner contemplated by the Prospectus, the applicable Prospectus Supplement and any applicable underwriting or other agreement; and (iv) all Shares will be issued in compliance with applicable federal and state securities laws.

The opinions set forth above are subject to the following exceptions, limitations and qualifications: (i) the effect of bankruptcy, insolvency, reorganization, arrangement, moratorium, fraudulent conveyance, fraudulent transfer and other similar laws relating to or affecting the rights of creditors, (ii) the effect of general principles of equity (including, without limitation, concepts of materiality, reasonableness, good faith and fair dealing and the possible unavailability of specific performance, injunctive relief and other equitable remedies), regardless of whether considered in a proceeding at law or in equity, and (iii) the effect of public policy considerations that may limit the rights of the parties to obtain further remedies.

We express no opinion with respect to the enforceability of: (i) provisions relating to choice of law, choice of venue, jurisdiction or waivers of jury trial, or (ii) any waiver of any usury defense, or to the extent enforceability of any provisions may be limited by bankruptcy, insolvency, reorganization, moratorium, or other similar laws relating to or affecting creditors' rights generally and by general equitable principles (regardless of whether such enforceability is considered in a proceeding at law or in equity). This opinion letter is rendered as of the date hereof, and we disclaim any undertaking to advise you of any subsequent changes in the facts stated or assumed herein or any subsequent changes in applicable law that may come to our attention, and we have assumed that no change in the facts stated or assumed herein or in applicable law after the date hereof will affect adversely our ability to render an opinion letter after the date hereof (i) containing the same legal conclusions set forth herein and (ii) subject only to such (or fewer) assumptions, limitations and qualifications as are contained herein.

We express no opinion herein as to the law of any state or jurisdiction other than the applicable statutory provisions of the Delaware General Corporation Law and the federal laws of the United States of America. We are not rendering any opinion as to compliance with any federal or state antifraud law, rule, or regulation relating to securities, or to the sale or issuance thereof.

We hereby consent to the filing of this letter with the Commission as an exhibit to the Registration Statement and to the reference to our firm therein and in the Prospectus Supplement under the caption "Legal Matters." In giving such consent, we do not thereby admit that this firm is within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission under such Section.

Very truly yours,

*/s/ Loeb & Loeb LLP*

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Loeb & Loeb LLP

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