
**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**

CYTORI THERAPEUTICS, INC.
(Exact name of Registrant as specified in its Charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

33-0827593
(IRS Employer
Identification Number)

**3020 Callan Road
San Diego, CA
(858) 458-0900**
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**Marc H. Hedrick, MD
President and Chief Executive Officer
Cytori Therapeutics, Inc.
3020 Callan Road
San Diego, CA 92121**
(Name, address, including zip code, and telephone number, including area code, of agent for service)

With a copy to:
**Jeffrey T. Baglio, Esq.
DLA Piper LLP (US)
4365 Executive Drive, Suite 1100
San Diego, CA 92121
Tel: (858) 677-1400
Fax: (858) 677-1401**

Approximate date of commencement of proposed sale to public: From time to time after the effective date of this Registration Statement as determined by the selling stockholder named in the prospectus contained herein.

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.

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

Large accelerated filer

Accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company)

Smaller reporting company

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

EXPLANATORY NOTE

Cytori Therapeutics, Inc. is filing this Amendment No. 1 to the Registration Statement on Form S-3 (File No. 333-200090), initially filed on November 12, 2014 (the "Registration Statement"), solely to update the section entitled "Incorporation by Reference" in the Prospectus and to file an updated consent of KPMG LLP, the registrant's independent registered public accounting firm. Accordingly, this Amendment No. 1 consists solely of the facing page, this explanatory note, Part II of the Registration Statement, the signatures and the exhibit index and is not intended to amend or delete any part of the Registration Statement except as specifically noted herein.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC permits us to “incorporate” into this prospectus information that we have filed with the SEC in other documents. The information incorporated by reference is an important part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus, while information that we file later with the SEC will automatically update and supersede the information in this prospectus. We incorporate by reference into this registration statement and prospectus the documents listed below, and any future filings we will make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of the initial registration statement but prior to effectiveness of the registration statement and after the date of this prospectus but prior to the termination of the offering of the securities covered by this prospectus (other than current reports or portions thereof furnished under Item 2.02 or Item 7.01 of Form 8-K):

- Our Annual Report on Form 10-K filed with the SEC on March 16, 2015 for the year ended December 31, 2014;
- Our Current Reports on Form 8-K filed with the SEC on January 8, 2015 and March 12, 2015;
- The description of our common stock contained in our registration statement on Form 10/A filed with the SEC on July 16, 2001 (File No. 000-32501).

These documents may also be accessed on our website at www.cytori.com. Except as otherwise specifically incorporated by reference in this prospectus, information contained in, or accessible through, our web site is not a part of this prospectus.

Any statement incorporated herein shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

We will provide to each person, including any beneficial owner, to whom a prospectus is delivered, without charge upon written or oral request, a copy of any or all of the information that has been incorporated by reference into this prospectus but not delivered with the prospectus, including exhibits that are specifically incorporated by reference into such documents. Requests should be directed to: Cytori Therapeutics, Inc., 3020 Callan Road, San Diego, CA 92121, Attn: Investor Relations, telephone: (858) 458-0900.

PART II — INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the costs and expenses payable by us in connection with the sale of the securities being registered hereby. All amounts are estimates except the Securities and Exchange Commission registration fee.

SEC registration fee	\$ 232
Legal fees and expenses	25,000
Accounting fees and expenses	5,000
Printing and reproduction costs	
Miscellaneous	
Total	<u>\$30,232</u>

Item 15. Indemnification of Directors and Officers.

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

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

We have obtained directors and officers liability insurance.

Item 16. Exhibits.

See Exhibit Index

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the

aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission (the "Commission") pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

- (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.
- (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 part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.
- (5) That, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

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 Act 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 Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, Cytori Therapeutics, Inc. has duly caused this Amendment No. 1 to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in San Diego, California, on March 16, 2015.

CYTORI THERAPEUTICS, INC.

/s/ Marc H. Hedrick

Marc H. Hedrick

President and Chief Executive Officer

Pursuant to the requirements of the Securities Act, this Amendment No. 1 to the 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/ Marc H. Hedrick</u> Marc H. Hedrick	President, Chief Executive Officer, and Director (Principal Executive Officer)	March 16, 2015
<u>/s/ Tiago M. Girão</u> Tiago M. Girão	Vice President of Finance and Chief Financial Officer (Principal Financial and Accounting Officer)	March 16, 2015
<u>/s/ John W. Townsend</u> John W. Townsend	Chief Accounting Officer (Principal Accounting Officer)	March 16, 2015
<u>*</u> David M. Rickey	Chairman of the Board of Directors	March 16, 2015
<u>*</u> Richard J. Hawkins	Director	March 16, 2015
<u>*</u> Paul W. Hawran	Director	March 16, 2015
<u>*</u> Gary A. Lyons	Director	March 16, 2015
<u>*</u> Gail K. Naughton	Director	March 16, 2015
<u>*</u> Tommy G. Thompson	Director	March 16, 2015

*By /s/ Marc H. Hedrick
Marc H. Hedrick
Attorney-in-Fact

Exhibit Index

The following exhibit index shows those exhibits filed with this report and those incorporated herein by reference:

<u>Exhibit Number</u>	<u>Description</u>
1.1*	Form of Underwriting Agreement (to be filed by amendment or as an exhibit to a report pursuant to Section 13(a), 13(c) or 15(d) of the Exchange Act)
4.1	Composite Certificate of Incorporation (incorporated by reference to our Registration Statement on Form S-3 filed with the Commission on November 19, 2013)
4.2	Amended and Restated Bylaws of Cytori Therapeutics, Inc. (incorporated by reference to our Quarterly Report on Form 10-Q filed with the Commission on August 14, 2003)
4.3	Amendment to Amended and Restated Bylaws of Cytori Therapeutics, Inc. (incorporated by reference to our Current Report on Form 8-K filed with the Commission on May 6, 2014)
4.4	Form of Warrant to Purchase Common Stock (incorporated by reference to our Current Report on Form 8-K filed with the Commission on September 8, 2014)
5.1**	Opinion of DLA Piper LLP (US)
23.1	Consent of KPMG LLP, Independent Registered Public Accounting Firm
23.2**	Consent of DLA Piper LLP (US) (included in Exhibit 5.1)
24.1**	Power of Attorney

* To be filed as an exhibit to a current report of the registrant on Form 8-K or other document to be incorporated herein by reference.

** Previously filed with the Registration Statement on Form S-3 (File No. 333-200090) filed with the SEC on November 12, 2014.

Consent of Independent Registered Public Accounting Firm

The Board of Directors
Cytori Therapeutics, Inc.:

We consent to the use of our reports with respect to the consolidated financial statements, the accompanying schedule of valuation and qualifying accounts and the effectiveness of internal control over financial reporting incorporated by reference herein and to the reference to our firm under the heading "Experts" in the prospectus.

Our report dated March 16, 2015 contains an explanatory paragraph that states that the Company's recurring losses from operations, liquidity position, and debt service requirements raises substantial doubt about its ability to continue as a going concern. The consolidated financial statements and financial statement schedule do not include any adjustments that might result from the outcome of that uncertainty.

/s/ KPMG LLP

San Diego, California
March 16, 2015