

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

**FORM 8-A**

FOR REGISTRATION OF CERTAIN CLASSES OF SECURITIES  
PURSUANT TO SECTION 12(b) OR 12(g) OF THE  
SECURITIES EXCHANGE ACT OF 1934

**CYTORI THERAPEUTICS, INC.**  
(Exact name of registrant as specified in its charter)

Delaware  
(State of incorporation  
or organization)

33-0827593  
(I.R.S. Employer  
Identification No.)

3020 Callan Road  
(Address of principal executive offices)

92121  
(Zip Code)

Securities to be Registered Pursuant to Section 12(b) of the Act

Title of each class  
to be so registered

Name of each exchange on which  
each class is to be registered

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Warrants to purchase common stock

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The NASDAQ Stock Market LLC

If this form relates to the registration of a class of securities pursuant to Section 12(b) of the Exchange Act and is effective pursuant to General Instruction A. (c), check the following box.

If this form relates to the registration of a class of securities pursuant to Section 12(g) of the Exchange Act and is effective pursuant to General Instruction A. (d), check the following box.

Securities Act registration statement file number to which this form relates: 333-210628

Securities to be registered pursuant to Section 12(g) of the Act: None

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**Item 1. Description of Registrant's Securities to be Registered.**

A description of the warrants to purchase common stock (the "Warrants") of Cytori Therapeutics, Inc. (the "Company") to be registered hereunder is contained in the section entitled "Description of Securities — Warrants" in the Company's prospectus filed with the Securities and Exchange Commission on May 26, 2016 pursuant to Rule 424(b) of the Securities Act of 1933, as amended, as supplemented by prospectus supplement No. 1 dated May 31, 2016 and prospectus supplement No. 2 dated June 6, 2016, relating to the Registration Statement on Form S-1 (file No. 333-210628), and such description is incorporated herein by reference.

**Item 2. Exhibits.**

| <b>Exhibit<br/>Number</b> | <b>Description</b>                                                                                                                                                                                                                 |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3.1                       | Composite Certificate of Incorporation (incorporated by reference to Exhibit 3.1 to the Company's Annual Report on Form 10-K filed on March 11, 2015).                                                                             |
| 3.2                       | Amended and Restated Bylaws of Cytori Therapeutics, Inc. (incorporated by reference to Exhibit 3.2 to the Company's Quarterly Report on Form 10-Q filed on August 14, 2003).                                                       |
| 3.3                       | Amendment to Amended and Restated Bylaws of Cytori Therapeutics, Inc. (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on May 6, 2014).                                                 |
| 3.4                       | Certificate of Designation of Preferences, Rights and Limitations of Series A 3.6% Convertible Preferred Stock (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on October 8, 2014).    |
| 3.5                       | Certificate of Amendment to Amended and Restated Certificate of Incorporation, as amended (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on May 10, 2016).                            |
| 4.1                       | Form of Series R Warrant underlying the Units (incorporated by reference to Exhibit 4.27 to the Company's Registration Statement on Form S-1 filed on May 10, 2016).                                                               |
| 4.2                       | Form of Warrant Agreement between Cytori Therapeutics, Inc. and Broadridge Corporate Issuer Solutions, Inc. (incorporated by reference to Exhibit 4.27 to the Company's Registration Statement on Form S-1 filed on May 10, 2016). |

**SIGNATURE**


Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the Registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereto duly authorized.

Cytori Therapeutics, Inc.

Dated: June 10, 2016

/s/ Tiago Girão

By:

  
Tiago Girão  
Chief Financial Officer