

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 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
San Diego, California**

(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**

Warrants, exercisable for Common Stock,
par value \$0.001 per share

NASDAQ Global Market

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: **333-157023**

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

INFORMATION REQUIRED IN REGISTRATION STATEMENT

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

The securities to be registered hereby are the warrants of Cytori Therapeutics, Inc. (the "Company"). The description of the warrants, contained in the section entitled "Description of Warrants" in the Prospectus included in the Company's Registration Statement on Form S-3 (File No. 333-157023), filed with the Securities and Exchange Commission on January 30, 2009, as amended and supplemented (the "Registration Statement"), is hereby incorporated by reference herein.

Item 2. Exhibits.

Exhibit Number	Description
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4.2	Form of Warrant (incorporated by reference to the Company's Current Report on Form 8-K filed on March 10, 2009).
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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, thereunto duly authorized.

Date: June 5, 2009

CYTORI THERAPEUTICS, INC.

By: /s/ Christopher J. Calhoun
Christopher J. Calhoun
Chief Executive Officer