

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

Form 8-K

Current Report

Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported): **August 28, 2007**

CYTORI THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or Other Jurisdiction of Incorporation)

000-32501

(Commission File
Number)

33-0827593

(I.R.S. Employer Identification Number)

3020 Callan Road, San Diego, California 92121
(Address of principal executive offices, with zip code)

(858) 458-0900

(Registrant's telephone number, including area code)

n/a

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
 - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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Item 1.01 **Entry into a Material Definitive Agreement**
Item 3.03 **Material Modification to Rights of Security Holders**

On August 28, 2007, we amended the Rights Agreement under our stockholder rights plan, which is a “poison pill” plan. Under the plan, the Rights separate from the Common Stock (i.e., the poison pill is triggered) when a person or group acquires beneficial ownership of 15% or more of our outstanding common stock. This amendment increases that threshold for Olympus Corporation up to 20%.

The effect of the amendment is to enable Olympus Corporation to increase its beneficial ownership to up to 20% without thereby triggering the poison pill.

This amendment to the Rights Agreement was entered into as a precautionary measure only and we do not have any information which would suggest that Olympus Corporation intends to change its current stockholdings in any way.

Item 9.01 **Financial Statements and Exhibits**

(c) **Exhibits**

4.1.1 Amendment No. 2 to Rights Agreement, dated as of August 28, 2007, between us and Computershare Trust Company, N.A. (as successor to Computershare Trust Company, Inc.), as Rights Agent.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

CYTORI THERAPEUTICS, INC.

Date: September 4, 2007

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

EXHIBIT INDEX

Exhibit Number

Description of Document

4.1.1

Amendment No. 2 to Rights Agreement, dated as of August 28, 2007, between us and Computershare Trust Company, N.A. (as successor to Computershare Trust Company, Inc.), as Rights Agent

CYTORI THERAPEUTICS, INC.

AMENDMENT NO. 2 TO RIGHTS AGREEMENT

This Amendment No. 2 To Rights Agreement (this "Amendment") is made as of August 28, 2007 between **Cytori Therapeutics, Inc.** (formerly known as **MacroPore Biosurgery, Inc.**), a Delaware corporation (the "Corporation"), and **Computershare Trust Company, N.A.** (as successor to **Computershare Trust Company, Inc.**), a Colorado Corporation (the "Rights Agent").

Whereas, the Corporation and the Rights Agent entered into that certain Rights Agreement dated as of May 29, 2003 (the "Rights Agreement") (capitalized terms used in this Agreement but not defined herein shall have the meaning assigned to them in the Rights Agreement); and

Whereas, the Corporation and the Rights Agent entered into that certain Amendment No. 1 to Rights Agreement dated as of May 12, 2005 (the "Amendment No. 1"); and

Whereas, the Corporation and the Rights Agent desire to irrevocably amend the Rights Agreement as provided below.

Now, Therefore, in consideration of the foregoing premises and the mutual covenants and conditions set forth below, and for other good and valuable consideration, the receipt of which is hereby acknowledged, the parties to this Amendment No. 2 to Rights Agreement hereby agree as follows:

AMENDMENT

1. Amendment of the Rights Agreement.

1.1 Preamble. The preamble of the Rights Agreement is hereby amended to reflect the name of the Corporation as, "Cytori Therapeutics, Inc. (formerly known as MacroPore Biosurgery, Inc.)," and the name of the Rights Agent as, "Computershare Trust Company, N.A. (as successor to Computershare Trust Company, Inc.)."

1.2 Section 1.10. Section 1.10 of the Rights Agreement is hereby amended in its entirety, to read:

"Close of Business" on any given date means 5:00 P.M., Eastern time, on such date; provided, however, that if such date is not a Business Day it means 5:00 P.M., Eastern time, on the next succeeding Business Day."

1.3 Section 2.1. Section 2.1 of the Rights Agreement is hereby amended in its entirety, to read:

"The Corporation hereby appoints the Rights Agent to act as agent for the Corporation in accordance with the terms and conditions hereof, and the Rights

Agent hereby accepts such appointment. The Corporation may from time to time appoint such co-Rights Agents as it may deem necessary or desirable, upon ten (10) days' prior written notice to the Rights Agent. The Rights Agent shall have no duty to supervise, and in no event shall be liable for, the acts or omissions of any such co-Rights Agent.”

1.4 Section 21. Section 21 of the Rights Agreement is hereby amended in its entirety, to read:

“The Rights Agent or any successor Rights Agent may resign and be discharged from its duties under this Agreement upon thirty (30) days' notice in writing mailed to the Corporation and to each transfer agent of the Common Stock or Preferred Stock by registered or certified mail, and, at the expense of the Corporation, to the holders of the Right Certificates by first-class mail. In the event the transfer agency relationship in effect between the Company and the Rights Agent terminates, the Rights Agent will be deemed to resign automatically on the effective date of such termination; and any required notice will be sent by the Company. The Corporation may remove the Rights Agent or any successor Rights Agent upon sixty (60) days' notice in writing, mailed to the Rights Agent or successor Rights Agent, as the case may be, and to each transfer agent of the Common Stock or Preferred Stock by registered or certified mail, and to holders of the Right Certificates by first-class mail. If the Rights Agent shall resign or be removed or shall otherwise become incapable of acting, the Corporation shall appoint a successor to the Rights Agent. If the Corporation shall fail to make such appointment within a period of sixty (60) days after giving notice of such removal or after it has been notified in writing of such resignation or incapacity by the resigning or incapacitated Rights Agent or by the holder of a Right Certificate (who shall, with such notice, submit his Right Certificate for inspection by the Corporation), then the registered holder of any Right Certificate may apply to any court of competent jurisdiction for the appointment of a new Rights Agent. Any successor Rights Agent, whether appointed by the Corporation or by such a court, shall be (i) a Person organized and doing business under the laws of the United States or of any of the States of New York, New Jersey, Colorado or California (or of any other state of the United States so long as such Person is authorized to do business in any of the States of New York, New Jersey, Colorado or California), in good standing, having an office in any of such States, which is subject to supervision or examination by federal or state authority and which (or the parent corporation of which) has at the time of its appointment as Rights Agent a combined capital and surplus of at least \$50,000,000 or (ii) an affiliate of such Person. After appointment, the successor Rights Agent shall be vested with the same powers, rights, duties and responsibilities as if it had been originally named as Rights Agent without further act or deed; but the predecessor Rights Agent shall deliver and transfer to the successor Rights Agent any property at the time held by it hereunder, and execute and deliver any further assurance, conveyance, act or deed necessary for the purpose. In case at the time such successor Rights Agent shall succeed to the agency created by this Agreement, any of the Right Certificates shall have been countersigned but not delivered, any

such successor Rights Agent may adopt the countersignature of a predecessor Rights Agent and deliver such Right Certificates so countersigned; and in case at that time any of the Right Certificates shall not have been countersigned, any successor Rights Agent may countersign such Right Certificates either in the name of the predecessor or in the name of the successor Rights Agent; and in all such cases such Right Certificates shall have the full force provided in the Right Certificates and in this Agreement. Not later than the effective date of any such appointment, the Corporation shall file notice thereof in writing with the predecessor Rights Agent and each transfer agent of the Common Stock or Preferred Stock, and mail a notice thereof in writing to the registered holders of the Right Certificates. Failure to give any notice provided for in this Section 21, however, or any defect therein, shall not affect the legality or validity of the resignation or removal of the Rights Agent or the appointment of the successor Rights Agent, as the case may be.

1.5 Section 25.1.1. Section 25.1.1 of the Rights Agreement is hereby amended to provide that notices or demands authorized by the Rights Agreement made to or on the Corporation shall be addressed to:

“Cytori Therapeutics, Inc.
3020 Callan Road
San Diego, CA 92121
Attention: Corporate Secretary”.

1.6 Section 25.1.2. Section 25.1.2 of the Rights Agreement is hereby amended to provide that notices or demands authorized by the Rights Agreement made to or on the Rights Agent shall be addressed to:

“Computershare Trust Company, N.A.
655 Montgomery Street
San Francisco, CA 94111”.

1.7 Section 25.10. A new Section 25.10 of the Rights Agreement is hereby added as follows:

“25.10. Force Majeure.

Notwithstanding anything to the contrary contained herein, Rights Agent shall not be liable for any delays or failures in performance resulting from acts beyond its reasonable control including, without limitation, acts of God, terrorist acts, shortage of supply, breakdowns or malfunctions, interruptions or malfunction of computer facilities, or loss of data due to power failures or mechanical difficulties with information storage or retrieval systems, labor difficulties, war, or civil unrest.”

1.8 Section 28. A new Section 28 of the Rights Agreement is hereby added as follows:

“28. Beneficial Ownership by Olympus Corporation.

Notwithstanding anything to the contrary in this Agreement: (A) the Beneficial Ownership by Olympus Corporation, either individually or together with its Affiliates and Associates (collectively, “Olympus”) of 20% or less of the outstanding shares Common Stock shall not constitute Olympus an Acquiring Person; and (B) Olympus shall not be deemed an Acquiring Person either (i) as a result of the acquisition of Common Stock by the Corporation which, by reducing the number of shares of Common Stock outstanding, increases the proportional number of shares Beneficially Owned by Olympus; provided however that if (1) Olympus would become an Acquiring Person (but for the operation of this subclause (B)(i)) as a result of the acquisition of shares of Common Stock by the Corporation, and (2) after such share acquisition by the Corporation, Olympus becomes the Beneficial Owner of any additional shares of Common Stock, then Olympus shall be deemed an Acquiring Person, or (ii) if (1) within eight (8) days after Olympus would otherwise have become an Acquiring Person (but for the operation of this subclause (B)(ii)), Olympus notifies the Board of Directors of the Corporation that Olympus did so inadvertently and (2) within two (2) Business Days (as defined in Section 1.8 hereof) after such notification, Olympus is the Beneficial Owner of 20% or less of the outstanding shares of Common Stock.”

2. **No Other Amendment.** Except as modified by this Amendment, the Rights Agreement, as previously amended by Amendment No. 1, shall remain in full force and effect without any modification. By executing this Amendment below, the Corporation certifies that this Amendment has been executed and delivered in compliance with the terms of Section 25.2 of the Rights Agreement. This Amendment shall be deemed an amendment to the Rights Agreement and shall become effective when executed and delivered by the Corporation and the Rights Agent as provided under Section 25.2 of the Rights Agreement.

3. **Effect of Amendment.** Except as and to the extent expressly modified by this Amendment, the Rights Agreement, as previously amended by Amendment No. 1, and the exhibits thereto, shall remain in full force and effect in all respects. In the event of a conflict or inconsistency between this Amendment and the Rights Agreement, as previously amended by Amendment No. 1, and the exhibits thereto, the provisions of this Amendment shall govern.

4. **Counterparts.** This Amendment may be executed in several counterparts, each of which shall constitute an original and all of which, when taken together, shall constitute one agreement.

[THIS SPACE INTENTIONALLY LEFT BLANK]

The parties hereto have caused this Amendment to be executed and delivered as of the day and year first written above.

Cytori Therapeutics, Inc.

By: /s/ Mark E. Saad

Mark E. Saad
Chief Financial Officer

Computershare Trust Company, N.A.
(as successor to **Computershare Trust Company, Inc.**)

By: /s/ Dennis V.

Moccia

Dennis V. Moccia
Manager, Contract Administration

