

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

SCHEDULE 13G
(Rule 13d-102)

**INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT TO
RULES 13d-1(b)(c), AND (d) AND AMENDMENTS THERETO FILED PURSUANT TO
RULE 13d-2(b)
(Amendment No 2)¹**

Cytori Therapeutics, Inc. (f/k/a MacroPore Biosurgery, Inc.)

(Name of Issuer)

Common Stock, \$.001par value

(Title of Class of Securities)

23283 K 10 5

(CUSIP Number)

December 31, 2005

(Date of Event Which Requires Filing of this Statement)

Check appropriate box to designate the rule pursuant to which this Schedule is filed:

Rule 13d-1(b)

Rule 13d-1(c)

Rule 13d-1(d)

¹The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter the disclosures provided in a prior cover page.

The information required in the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

1		NAME OF REPORTING PERSON S.S. or I.R.S. IDENTIFICATION NO. OF ABOVE PERSON (ENTITIES ONLY) Neil Gagnon
2		CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* (a) <input type="checkbox"/> (b) <input checked="" type="checkbox"/>
3		SEC USE ONLY
4		CITIZENSHIP OR PLACE OF ORGANIZATION United States of America
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	5	SOLE VOTING POWER 780,154
	6	SHARED VOTING POWER 384,835
	7	SOLE DISPOSITIVE POWER 729,943
	8	SHARED DISPOSITIVE POWER 1,311,053
9	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON 2,040,996	
10	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN SHARES* <input type="checkbox"/>	
11	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9 13.4%	
12	TYPE OF REPORTING PERSON* IN	

***SEE INSTRUCTION BEFORE FILLING OUT!**

Item 1(a). Name of Issuer:

Cytori Therapeutics, Inc. (f/k/a MacroPore Biosurgery, Inc.)

Item 1(b). Address of Issuer's Principal Executive Offices:

3020 Callan Road
San Diego, CA 92121

Item 2(a). Name of Person Filing:

Neil Gagnon

Item 2(b). Address of Principal Business Office or, if none, Residence:

1370 Avenue of the Americas
Suite 2400
New York, NY 10019

Item 2(c). Citizenship:

United States of America

Item 2(d). Title of Class of Securities:

Common Shares, par value \$.001 per share

Item 2(e). CUSIP Number:

23283 K 10 5

Item 3. Type of Reporting Person:

Not Applicable

Item 4. Ownership.

Item 4(a). Amount Beneficially Owned:

As of December 31, 2005, Neil Gagnon beneficially owned 2,040,996 shares of Common Stock of Cytori Therapeutics, Inc. (f/k/a MacroPore Biosurgery, Inc.), which amount includes (i) 386,798 shares beneficially owned by Mr. Gagnon over which he has sole voting power and sole dispositive power; (ii) 46,736 shares beneficially owned by Mr. Gagnon over which he has sole voting power and shared dispositive power; (iii) 220,215 shares beneficially owned by Lois Gagnon, Mr. Gagnon's wife, over which he has shared voting power and shared dispositive power; (iv) 2,480 shares held by Mr. Gagnon and Mrs. Gagnon as Joint Tenants with Rights of Survivorship, over which he has shared voting power and shared dispositive power; (v) 85,590 shares held by the Lois E. and Neil E. Gagnon Foundation (the "Foundation") of which Mr. Gagnon is a trustee and over which Mr. Gagnon has shared voting power and shared dispositive power; (vi) 76,550 shares held by the Gagnon Family Limited Partnership (the "Partnership") of which Mr. Gagnon is a partner and over which he has shared voting power and shared dispositive power; (vii) 63,260 shares held by the Gagnon Grandchildren Trust (the "Trust") over which Mr. Gagnon has shared dispositive power but no voting power; (viii) 339,730 shares held by four hedge funds (collectively, the "Funds") of which Mr. Gagnon is either the principal executive officer of the manager or the managing member of a member of the general partner and over which he has sole voting power and sole dispositive power; (ix) 3,415 shares held by the Gagnon Securities Profit Sharing Plan and Trust (the "Plan") of which Mr. Gagnon is a trustee and over which he has sole voting power and sole dispositive power; (ix) 3,475 shares held by the Plan over which Mr. Gagnon has sole voting power and shared dispositive power; and (x) 812,747 shares held for certain customers of Gagnon Securities LLC, of which Mr. Gagnon is the managing member and the principal owner and over which he has shared dispositive power but no voting power.

Item 4(b). Percent of Class:

13.4% beneficially owned by Mr. Gagnon. Calculation of percentage of beneficial ownership is based on 15,249,783 shares of Issuer's Common Stock outstanding as of October 31, 2005 as reported by the Issuer in its Quarterly Report on Form 10-Q for the period ended September 30, 2005.

Item 4(c). Number of shares as to which such person has:

- (i) sole power to vote or to direct the vote: 780,154
- (ii) shared power to vote or to direct the vote: 384,835
- (iii) sole power to dispose or to direct the disposition of: 729,943
- (iv) shared power to dispose or to direct the disposition of: 1,311,053

Items 5-9. Not applicable.

Filing of this statement by Mr. Gagnon shall not be deemed an admission that he beneficially owns the securities reported herein as held in customer accounts at Gagnon Securities LLC, by the Foundation, the Partnership, the Trust, the Funds or the Plan. Mr. Gagnon expressly disclaims beneficial ownership of all securities held in such customer accounts or by the Foundation, the Partnership, the Trust, the Funds or the Plan. No single client's interest as reported in the customer accounts at Gagnon Securities LLC exceeds 5% of the outstanding Common Stock of the Issuer.

Item 10. Certification.

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Februray 7, 2006
Date

/s/ Neil Gagnon
Neil Gagnon