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): **May 6, 2010**

CYTORI THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Delaware	**000-32501**	**33-0827593**
(State or Other Jurisdiction of Incorporation)	(Commission File Number)	(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))

Item 2.02 Results of Operations and Financial Condition

On May 6, 2010, Cytori Therapeutics, Inc. (Company) issued a press release announcing its financial results for the first quarter ended March 31, 2010. A copy of the press release is attached hereto as Exhibit 99.1 and is incorporated herein by reference. In addition, on the same date, the Company has posted further insight into those results of operations in an open letter to its stockholders and other interested parties in the blog on the Investor Relations section of its website. Acopy of the letter is attached hereto as exhibit 99.2.

The information disclosed under this Item 2.02 in this report, including Exhibits 99.1 and 99.2 hereto, are being furnished and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, nor shall it be incorporated by reference into any registration statement or other document pursuant to the Securities Act of 1933, as amended, except as expressly set forth in such filing.

Item 9.01 Financial Statements and Exhibits

(d) Exhibits

Exhibit No.	**Description**
99.1	Cytori Therapeutics, Inc. Press Release, dated May 6, 2010*
99.2	Cytori Therapeutics, Inc. Shareholder Letter, dated May 6, 2010*

* Exhibits 99.1 and 99.2 hereto are being furnished and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, nor shall it be incorporated by reference into any registration statement or other document pursuant to the Securities Act of 1933, as amended, except as expressly set forth in such filing.

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: May 6, 2010

By: /s/ Mark E. Saad
Mark E. Saad
Chief Financial Officer

EXHIBIT 99.1

Cytori Reports First Quarter Results

SAN DIEGO, May 6, 2010 -- Cytori Therapeutics (NASDAQ:CYTX) is reporting its first quarter financial results. More information on our commercial and clinical progress is posted online in the 'May 2010 Shareholder Letter' at http://ir.cytoritx.com.

Key accomplishments for Cytori in the first quarter and year-to-date include the following:

- Continued growth in Celution® and StemSource® System and consumables sales
- Sale and installation of a StemSource® Cell Bank in Japan
- FDA clearance (Q1) and US launch (Q2) of the PureGraft™ autologous fat grafting system
- Gained further clarity from the FDA on US regulatory pathway for the Celution® System

Systems and Consumables

In the first quarter of 2010, Cytori increased its cumulative number of 'revenue systems' (those sold directly to physicians, distributors or placed, which are generating consumable sales) to 110, compared to 59 at the end of the first quarter of 2009 and 101 at the end of the prior quarter.

In addition, 342 consumables were shipped in the first quarter of 2010, compared to 337 consumables shipped in the fourth quarter of 2009 and 241 consumables shipped in the first quarter of 2009. Of these, 261 consumables were re-orders in the first quarter of 2010, compared to 164 re-orders in the same quarter of 2009 and 258 re-orders in the prior quarter. More than 2,300 cumulative consumables have been shipped to date since commercialization began in Q1 2008.

System & Consumable Order Trends

	Q1 2010	Q4 2009	Q1 2009
Revenue Systems (Cumulative)	110	101	59
Consumables Shipped	342	337	241
Consumable Re-orders	261	258	164

Financials

Total revenues for the first quarter of 2010 were $4.4 million, which consisted of $2.3 million in product revenue from Celution® and StemSource® sales in Europe, Asia and the United States and $2.1 million in development revenue. This compares to $1.9 million in total revenues in the first quarter of 2009, of which all $1.9 million were attributable to product sales. Gross margin was 59% with a gross profit of $1.3 million, up from 43% with a gross profit of $0.8 million in the first quarter of 2009.

Total operating expenses were $5.6 million, compared to $6.4 million in the first quarter of 2009. Included in operating expenses was a $1.9 million net reduction in non-cash change in fair value of the warrant and option liability compared to a $0.8 million net reduction in the first quarter of 2009.

Cytori ended the quarter with $22.7 million in cash and cash equivalents plus $2.7 million in accounts receivable, net. Subsequent to end of the quarter, Cytori raised an additional $2.3 million from scheduled sales of its common stock under its current financing arrangement with Seaside 88, LP.

Conference Call & Shareholder Letter

Cytori will host a conference call and question and answer session at 10:30 a.m. Eastern Time today to further discuss these results. The audio webcast of the conference call may be accessed under "Webcasts" in the Investor Relations section of the Cytori's website (www.cytori.com). The webcast will be available live and by replay two hours after the call and archived for one year. More information on our commercial and clinical progress is posted online in the 'May 2010 Shareholder Letter' at http://ir.cytoritx.com.

About Cytori

Cytori is a leader in providing patients and physicians around the world with medical technologies that harness the potential of adult regenerative cells from adipose tissue. The Celution® System family of medical devices and instruments is being sold into the European and Asian cosmetic and reconstructive surgery markets but is not yet available in the United States. Our StemSource® product line is sold globally for cell banking and research applications. www.cytori.com

Cautionary Statement Regarding Forward-Looking Statements

This press release includes forward-looking statements regarding events, trends and business prospects, which may affect our future operating results and financial position. Such statements, including, but not limited to, those regarding continued growth in Celution® and StemSource® System and consumable sales, the US launch of our PureGraft™ autologous fat grafting system, additional clarity regarding the US regulatory pathway for the Celution® System are all subject to risks and uncertainties that could cause our actual results and financial position to differ materially. Some of these risks and uncertainties include, but are not limited to, risks related to our history of operating losses, the need for further financing and our ability to access the necessary additional capital for our business, inherent risk and uncertainty in the protection intellectual property rights, regulatory uncertainties regarding the collection and results of, clinical data, dependence on third party performance, as well as other risks and uncertainties described under the "Risk Factors" in Cytori's Securities and

Exchange Commission Filings on Form 10-K and Form 10-Q. We assume no responsibility to update or revise any forward-looking statements to reflect events, trends or circumstances after the date they are made.

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Contact:

Tom Baker

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tbaker@cytori.com

CYTORI THERAPEUTICS, INC.
CONSOLIDATED CONDENSED BALANCE SHEETS
(UNAUDITED)

	As of March 31, 2010	As of December 31, 2009
Assets		
Current assets:		
Cash and cash equivalents	$ 22,684,000	$ 12,854,000
Accounts receivable, net of allowance for doubtful accounts of $376,000 and $751,000 in 2010 and 2009, respectively	2,689,000	1,631,000
Inventories, net	2,603,000	2,589,000
Other current assets	949,000	1,024,000
Total current assets	28,925,000	18,098,000
Property and equipment, net	1,287,000	1,314,000
Investment in joint venture	259,000	280,000
Other assets	472,000	500,000
Intangibles, net	580,000	635,000
Goodwill	3,922,000	3,922,000
Total assets	$ 35,445,000	$ 24,749,000
Liabilities and Stockholders' Equity (Deficit)		
Current liabilities:		
Accounts payable and accrued expenses	$ 4,334,000	$ 5,478,000
Current portion of long-term obligations	2,778,000	2,705,000
Total current liabilities	7,112,000	8,183,000
Deferred revenues, related party	5,512,000	7,634,000
Deferred revenues	2,422,000	2,388,000
Warrant liability	4,105,000	6,272,000
Option liability	1,400,000	1,140,000
Long-term obligations, less current portion	2,156,000	2,790,000
Total liabilities	22,707,000	28,407,000
Commitments and contingencies		
Stockholders' equity (deficit):		
Preferred stock, $0.001 par value; 5,000,000 shares authorized; -0- shares issued and outstanding in 2010 and 2009	—	—
Common stock, $0.001 par value; 95,000,000 shares authorized; 44,524,580 and 40,039,259 shares issued and 44,524,580 and 40,039,259 shares outstanding in 2010 and 2009, respectively	44,000	40,000
Additional paid-in capital	197,645,000	178,806,000
Accumulated deficit	(184,951,000)	(182,504,000)
Treasury stock, at cost	—	—
Total stockholders' equity (deficit)	12,738,000	(3,658,000)
Total liabilities and stockholders' equity (deficit)	$ 35,445,000	$ 24,749,000

CYTORI THERAPEUTICS, INC.
CONSOLIDATED CONDENSED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(UNAUDITED)

	For the Three Months Ended March 31,	
	2010	**2009**
Product revenues:		
Related party	$ —	$ 564,000
Third party	2,266,000	1,348,000
	2,266,000	1,912,000
Cost of product revenues	930,000	1,087,000
Gross profit	1,336,000	825,000
Development revenues:		
Development, related party	2,122,000	—
Research grants and other	21,000	8,000
	2,143,000	8,000
Operating expenses:		
Research and development	2,245,000	3,468,000
Sales and marketing	1,999,000	1,286,000
General and administrative	3,218,000	2,494,000
Change in fair value of warrants	(2,167,000)	(1,021,000)
Change in fair value of option liability	260,000	210,000
Total operating expenses	5,555,000	6,437,000
Operating loss	(2,076,000)	(5,604,000)
Other income (expense):		
Interest income	1,000	14,000
Interest expense	(276,000)	(400,000)
Other income (expense), net	(75,000)	(92,000)
Equity loss from investment in joint venture	(21,000)	(16,000)
Total other income (expense), net	(371,000)	(494,000)
Net loss	$ (2,447,000)	$ (6,098,000)
Basic and diluted net loss per share	$ (0.06)	$ (0.20)
Basic and diluted weighted average common shares	42,281,381	30,266,169

CYTORI THERAPEUTICS, INC.
CONSOLIDATED CONDENSED STATEMENTS OF CASH FLOWS
(UNAUDITED)

	For the Three Months Ended March 31,	
	2010	**2009**
Cash flows from operating activities:		
Net loss	$ (2,447,000)	$ (6,098,000)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	273,000	346,000
Amortization of deferred financing costs and debt discount	138,000	199,000
Warranty provision	—	(11,000)
Provision for doubtful accounts	375,000	150,000
Change in fair value of warrants	(2,167,000)	(1,021,000)
Change in fair value of option liability	260,000	210,000
Share-based compensation expense	766,000	643,000
Equity loss from investment in joint venture	21,000	16,000
Increases (decreases) in cash caused by changes in operating assets and liabilities:		
Accounts receivable	(1,433,000)	(61,000)
Inventories	(14,000)	292,000
Other current assets	49,000	(18,000)
Other assets	7,000	26,000
Accounts payable and accrued expenses	(1,144,000)	(682,000)
Deferred revenues, related party	(2,122,000)	—
Deferred revenues	34,000	19,000
Long-term deferred rent	—	(84,000)
Net cash used in operating activities	(7,404,000)	(6,074,000)
Cash flows from investing activities:		
Purchases of property and equipment	(191,000)	(9,000)
Net cash used in investing activities	(191,000)	(9,000)
Cash flows from financing activities:		
Principal payments on long-term obligations	(652,000)	(203,000)
Proceeds from exercise of employee stock options and warrants	7,038,000	3,000
Proceeds from sale of common stock	11,376,000	6,086,000
Costs related to sale of common stock	(337,000)	(875,000)
Proceeds from sale of treasury stock	—	3,933,000
Net cash provided by financing activities	17,425,000	8,944,000
Net increase in cash and cash equivalents	9,830,000	2,861,000
Cash and cash equivalents at beginning of period	12,854,000	12,611,000
Cash and cash equivalents at end of period	$ 22,684,000	$ 15,472,000
Supplemental disclosure of cash flow information:		
Cash paid during period for:		
Interest	$ 143,000	$ 205,000

EXHIBIT 99.2

May 6, 2010

First Quarter 2010 Results and Commercial and Clinical Update

Dear Shareholders,

The first quarter of 2010 was very strong for Cytori. In particular, we substantially grew product revenues, shipped more consumables per quarter than ever, launched a new product platform in the U.S. and completed several important objectives related to our pipeline.

Today, Cytori sells differentiated and proprietary products to the private-pay cosmetic surgery markets within the U.S., Europe, and Asia as well as innovative equipment for cell banking and research. In parallel, we are laying the foundation for future growth through advancements in our pipeline of therapeutic applications for our core product, the Celution® System. Celution® has been used by our physician customers to treat many debilitating or fatal medical conditions such as cardiovascular disease, non-healing and recalcitrant wounds from radiation injury, urinary incontinence and others.

Despite the breadth of diseases represented in this limited list above, there is a clear common thread connecting them all. That thread is ischemia. In these diseases, as well as many others, Cytori's technology helps patients by improving tissue ischemia or low blood supply conditions. Adipose-derived stem and regenerative cells (ADRCs) have unlimited potential in a large number of diseases by improving blood supply to tissues that would otherwise remain ischemic (or blood starved). When added to adipose tissue, ADRCs improve survival of this natural filler by improving blood supply and enhancing the flow of oxygen and nutrients. When ADRCs are administered directly into the diseased heart, ischemia is improved, based on a comprehensive portfolio of basic and preclinical research. This common mechanism of action of ADRCs formed the basis for Cytori's RESTORE 2 study that has completed enrollment in Europe as well as two Cytori sponsored cardiovascular studies that have been accepted for presentation at two forthcoming scientific meetings. Furthermore, a growing number of physicians around the world are further expanding the use of Cytori technology with investigator sponsored clinical studies.

Product Sales

In the first quarter, product revenues were $2.3 million, representing 19% growth over Q1 2009 product revenues of $1.9 million and 80% growth over the 4th quarter 2009. Revenues grew from a mix of Celution® and StemSource® sales in Europe, Asia and the U.S. and the move toward increased direct sales. Growth of consumable reorders reflects the established base of satisfied customers who are increasingly integrating Celution® into their practices. We also achieved our second StemSource® Cell Bank installation in Japan, which was ordered by one of our existing Celution® customers to meet growing patient demand to store their own stem cells following liposuction for subsequent cosmetic procedures.

The cumulative number of revenue generating systems grew to 110 in the quarter, compared to 59 at the end of the first quarter of 2009. In addition, 342 consumables, including 261 re-orders, were shipped, compared to 241 total consumables shipped in Q1 2009, 164 being reorders. More than 2,300 cumulative consumables have been shipped since commercialization began in Q1 2008.

Product Pipeline and Future Growth

Cosmetic and Reconstructive Surgery

Near term sales growth will come through a combination of increased sales of existing products including Celution®, StemSource® and PureGraft® for cosmetic and research applications as well as emerging consumable sales for use in breast reconstruction. Our FDA cleared PureGraft® product was launched at the American Society of Aesthetic Plastic Surgery meeting in Washington D.C. last week. More information on this unique product can be found on our newly introduced PureGraft® e-commerce site at www.puregraft.com. We anticipate EU approval on PureGraft® soon and expect this will contribute to sales growth increasingly throughout 2010.

Currently, reconstructive surgery represents only a fraction of overall consumable sales. We believe that 12 month data from RESTORE 2 will significantly expand our ability to obtain third party and governmental reimbursement, supporting increased adoption in that market. Well in advance of RESTORE 2 data release, Cytori has begun to expand its price negotiation and reimbursement efforts in Europe, focused principally on two areas. First, we are obtaining key opinion leader support for Cytori technology specifically in the Italian and U.K. markets. In addition, we are accelerating our direct lobbying efforts to third party payers and governmental gate keepers responsible for reimbursement decision making. Significant progress is being made in both markets and we will keep you updated as we achieve key milestones.< /font>

Interventional Cardiology

Tomorrow, May 7th, Cytori investigators will report results from our two cardiac clinical trials: APOLLO for acute myocardial infarction (heart attack) and PRECISE for chronic myocardial ischemia, a severe form of chronic heart disease. Specifically, these results will be presented at the 7th International Symposium on Stem Cell Therapy and Cardiovascular Innovations in Madrid, Spain. Following the presentation of these results, we will address possible next steps in this area.

U.S. Regulatory Approval for the Celution® System

Obtaining U.S. approval for Celution® is a major goal for Cytori. A Pre-IDE meeting with the FDA is scheduled this month to define clinical objectives needed for Celution® approval for soft tissue reconstruction. We anticipate that our next opportunity to update investors on this U.S. application will be upon the acceptance of our IDE application, which would signify that the FDA has agreed to our trial design.

In the meantime, we intend to rapidly grow U.S. sales of our PureGraft® and StemSource® products. This benefits today's top line growth and helps Cytori build key U.S. physician relationships and product awareness as well as strengthen our position as the clear leader in the field.

'Cytori's Innovation Partners' and New Uses of Cytori Technology

Regenerative medicine is a new and exciting field of medicine. As a result, many physician researchers want safe, clinical-grade cells to restore the lives of their patients. This is a common theme we hear each week. As a result, many hospitals around the world are conducting independent investigator-initiated studies using the Celution® System for indications as diverse as urinary incontinence, cardiomyopathy, renal failure, liver disease, radiation injury and burns. The value that our 'innovation partners' bring is undeniable. In fact, RESTORE I, a breast cancer reconstruction study, is the first example of the value of this opportunity that has led to our first potential U.S. indication for Celution®.

In short, Celution® is an 'innovation platform' as much as a therapeutic medical device. This aspect of our business is a critical strategic advantage for the Company. By outsourcing the early clinical development to expert clinicians in this way, we cost effectively accelerate our clinical development program and create greater opportunities to take key indications directly to market or to establish strategic partnerships.

Operating Results

We generated a substantial increase in gross margin. Gross margin increased to 59% in the first quarter 2010 compared with 43% in the first quarter 2009. The improvement in margin is due largely to a greater proportion of direct sales and improved manufacturing efficiencies.

While aggressively driving sales, we continue to control our expenses. Total operating expenses were effectively unchanged compared to the first quarter of 2009, excluding the non-cash change in warrant and option liabilities. We also substantially improved our balance sheet, ending the first quarter with $22.7 million in cash and cash equivalents compared to $12.9 million at the end of 2009. Subsequent to the end of the quarter, we raised an additional $2.3 million from the sale of stock through our committed equity agreement with Seaside 88, LP.

Summary

In our 2009 year end shareholder letter, I mentioned our 3 core objectives for 2010 and I would like to summarize them: 1) expand our cosmetic and reconstructive surgery related sales, 2) advance our core pipeline applications and 3) establish a substantive partnership. The first quarter of 2010 represents a very strong start to the year. We are confident in continued sales growth for the remainder of 2010, with clinical outcomes to be reported from our APOLLO and PRECISE cardiovascular trials this week. The increased visibility provided by both sales growth and the reporting of key clinical data provide a basis for advancing discussions with potential partners.

Thank you for your interest in Cytori and we look forward to keeping you updated on our growth and progress.

Warm Regards,

Christopher J. Calhoun
Chief Executive Officer

Cautionary Statement Regarding Forward-Looking Statements

This shareholder letter includes forward-looking statements regarding events, trends and business prospects, which may affect our future operating results and financial position. Such statements, including, but not limited to, those regarding our forecasts for 2010 operating expenses and cash utilization rate, future growth through advancements in our pipeline of therapeutic applications for our core product, the Celution® System, our sales expectations, including those from our marketing and distribution partners, the continued growth of investigator clinical trials using our technology, system and consumable order trends, our ability to obtain EU approval and successfully commercialize the PureGraft™ product, as well as our ability to obtain third party and governmental reimbursement for our consumables an d therefore increase adoption in the reconstructive surgery market, are all subject to risks and uncertainties that could cause our actual results and financial position to differ materially. Some of these risks and uncertainties include, but are not limited to, risks related to our history of operating losses, the need for further financing and our ability to access the necessary additional capital for our business, inherent risk and uncertainty in the protection intellectual property rights, regulatory uncertainties regarding the collection and results of, clinical data, dependence on third party performance, as well as other risks and uncertainties described under the "Risk Factors" in Cytori's Securities and Exchange Commission Filings on Form10-K and 10-Q. We assume no responsibility to update or revise any forward-looking statements to reflect events, trends or circumstances after the date they are made.