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

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended March 31, 2011

OR

o **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

Commission file number 001-34375

CYTORI THERAPEUTICS, INC.

(Exact name of Registrant as Specified in Its Charter)

DELAWARE	**33-0827593**
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
3020 CALLAN ROAD, SAN DIEGO, CALIFORNIA	**92121**
(Address of principal executive offices)	(Zip Code)

Registrant's telephone number, including area code: **(858) 458-0900**

Indicate by check mark whether the registrant: (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 ("the Exchange Act") during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☒ No o

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes o No o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definition of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act (Check one).

Large Accelerated Filer o	Accelerated Filer ☒	Non-Accelerated Filer o (Do not check if a smaller reporting company)	Smaller reporting company o

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes o No ☒

As of April 29, 2011, there were 52,470,226 shares of the registrant's common stock outstanding.

CYTORI THERAPEUTICS, INC.

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PART I. FINANCIAL INFORMATION
Item 1. Financial Statements

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

	As of March 31, 2011	As of December 31, 2010
Assets		
Current assets:		
Cash and cash equivalents	$ 42,647,000	$ 52,668,000
Accounts receivable, net of reserves of $378,000 and $306,000 in 2011 and 2010, respectively	1,774,000	2,073,000
Inventories, net	3,552,000	3,378,000
Other current assets	964,000	834,000
Total current assets	48,937,000	58,953,000
Property and equipment, net	1,773,000	1,684,000
Restricted cash and cash equivalents	350,000	350,000
Investment in joint venture	413,000	459,000
Other assets	1,488,000	566,000
Intangibles, net	358,000	413,000
Goodwill	3,922,000	3,922,000
Total assets	$ 57,241,000	$ 66,347,000
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable and accrued expenses	$ 5,916,000	$ 6,770,000
Current portion of long-term obligations	8,724,000	6,453,000
Total current liabilities	14,640,000	13,223,000
Deferred revenues, related party	4,281,000	5,512,000
Deferred revenues	4,919,000	4,929,000
Warrant liability	8,458,000	4,987,000
Option liability	880,000	1,170,000
Long-term deferred rent	386,000	398,000
Long-term obligations, net of discount, less current portion	11,321,000	13,255,000
Total liabilities	44,885,000	43,474,000
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, $0.001 par value; 5,000,000 shares authorized; -0- shares issued and outstanding in 2011 and 2010	-	-
Common stock, $0.001 par value; 95,000,000 shares authorized; 52,134,367 and 51,955,265 shares issued and 52,134,367 and 51,955,265 shares outstanding in 2011 and 2010, respectively	52,000	52,000
Additional paid-in capital	234,374,000	232,819,000
Accumulated deficit	(222,070,000)	(209,998,000)
Total stockholders' equity	12,356,000	22,873,000
Total liabilities and stockholders' equity	$ 57,241,000	$ 66,347,000

SEE NOTES TO UNAUDITED CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

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

	For the Three Months Ended March 31,	
	2011	**2010**
Product revenues:		
Related party	$ -	$ -
Third party	1,362,000	2,266,000
	1,362,000	2,266,000
Cost of product revenues	842,000	930,000
Gross profit	520,000	1,336,000
Development revenues:		
Development, related party	1,231,000	2,122,000
Research grants and other	4,000	21,000
	1,235,000	2,143,000
Operating expenses:		
Research and development	3,047,000	2,245,000
Sales and marketing	3,226,000	1,999,000
General and administrative	3,544,000	3,218,000
Change in fair value of warrants	3,471,000	(2,167,000)
Change in fair value of option liability	(290,000)	260,000
Total operating expenses	12,998,000	5,555,000
Operating loss	(11,243,000)	(2,076,000)
Other income (expense):		
Interest income	2,000	1,000
Interest expense	(738,000)	(276,000)
Other expense, net	(47,000)	(75,000)
Equity loss from investment in joint venture	(46,000)	(21,000)
Total other income (expense)	(829,000)	(371,000)
Net loss	$ (12,072,000)	$ (2,447,000)
Basic and diluted net loss per common share	$ (0.23)	$ (0.06)
Basic and diluted weighted average common shares	51,994,708	42,281,381

SEE NOTES TO UNAUDITED CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

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

	For the Three Months Ended March 31,	
	2011	**2010**
Cash flows from operating activities:		
Net loss	$ (12,072,000)	$ (2,447,000)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	194,000	273,000
Amortization of deferred financing costs and debt discount	240,000	138,000
Increase in allowance for doubtful accounts	21,000	375,000
Change in fair value of warrants	3,471,000	(2,167,000)
Change in fair value of option liability	(290,000)	260,000
Stock-based compensation	881,000	766,000
Equity loss from investment in joint venture	46,000	21,000
Increases (decreases) in cash caused by changes in operating assets and liabilities:		
Accounts receivable	278,000	(1,433,000)
Inventories	(174,000)	(14,000)
Other current assets	(130,000)	49,000
Other assets	(922,000)	7,000
Accounts payable and accrued expenses	(854,000)	(1,144,000)
Deferred revenues, related party	(1,231,000)	(2,122,000)
Deferred revenues	(10,000)	34,000
Long-term deferred rent	(12,000)	-
Net cash used in operating activities	(10,564,000)	(7,404,000)
Cash flows from investing activities:		
Purchases of property and equipment	(131,000)	(191,000)
Net cash used in investing activities	(131,000)	(191,000)
Cash flows from financing activities:		
Principal payments on long-term obligations	-	(652,000)
Proceeds from exercise of employee stock options and warrants	674,000	7,038,000
Proceeds from sale of common stock	-	11,376,000
Costs from sale of common stock	-	(337,000)
Net cash provided by financing activities	674,000	17,425,000
Net increase (decrease) in cash and cash equivalents	(10,021,000)	9,830,000
Cash and cash equivalents at beginning of period	52,668,000	12,854,000
Cash and cash equivalents at end of period	$ 42,647,000	$ 22,684,000
Supplemental disclosure of cash flows information:		
Cash paid during period for:		
Interest	$ 499,000	$ 143,000
Supplemental schedule of non-cash investing and financing activities:		
Capital equipment lease	$ 101,000	$ -

SEE NOTES TO UNAUDITED CONSOLIDATED CONDENSED FINANCIAL STATEMENTS

CYTORI THERAPEUTICS, INC.
NOTES TO CONSOLIDATED CONDENSED FINANCIAL STATEMENTS
March 31, 2011
(UNAUDITED)

1. Basis of Presentation

Our accompanying unaudited consolidated condensed financial statements as of March 31, 2011 and for the three months ended March 31, 2011 and 2010 have been prepared in accordance with accounting principles generally accepted in the United States of America for interim financial information. Accordingly, they do not include all of the information and footnotes required by accounting principles generally accepted in the United States of America for annual financial statements. Our consolidated condensed balance sheet at December 31, 2010 has been derived from the audited financial statements at that date, but does not include all of the information and footnotes required by accounting principles generally accepted in the United States of America for complete financial statements. In the opinion of management, all adjustments (consisting of normal recurring adjustments) considered necessary for a fair presentation of the financial position and results of operations of Cytori Therapeutics, Inc., and our subsidiaries (the Company) have been included. Operating results for the three months ended March 31, 2011 are not necessarily indicative of the results that may be expected for the year ending December 31, 2011. These financial statements should be read in conjunction with the consolidated financial statements and notes therein included in our annual report on Form 10-K for the year ended December 31, 2010.

2. Use of Estimates

The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions affecting the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenue and expenses during the reporting period. Our most significant estimates and critical accounting policies involve recognizing revenue, evaluating goodwill for impairment, valuing our put option arrangement with Olympus Corporation, valuing warrants, determining the assumptions used in measuring share-based compensation expense, valuing our deferred tax assets, assessing how to report our investment in Olympus-Cytori, Inc., and valuing allowances for doubtful accounts and inventories.

Actual results could differ from these estimates. Current economic conditions, including illiquid credit markets and volatile equity markets, contribute to the inherent uncertainty of such estimates. Management's estimates and assumptions are reviewed periodically, and the effects of revisions are reflected in the consolidated financial statements in the periods they are determined to be necessary.

3. Capital Availability

We incurred net losses of $12,072,000 and $2,447,000 for the three months ended March 31, 2011 and 2010, respectively. We have an accumulated deficit of $222,070,000 as of March 31, 2011. Additionally, we have used net cash of $10,564,000 and $7,404,000 to fund our operating activities for the three months ended March 31, 2011 and 2010, respectively**.** To date these operating losses have been funded primarily from outside sources of invested or borrowed capital.

Management recognizes the need to generate positive cash flows in future periods and/or to obtain additional capital from various sources. In the continued absence of positive cash flows from operations, no assurance can be given that we can generate sufficient revenue to cover operating costs or that additional financing will be available to us and, if available, on terms acceptable to us in the future.

During 2011 and 2010, we expanded our commercialization activities while simultaneously pursuing available financing sources to support operations and growth. We have had, and we may continue to have, an ongoing need to raise additional cash from outside sources to fund our operations. If we cannot do so when required, we would need to reduce our research, development, and administrative operations, including reductions of our employee base, in order to offset lack of available funding. We continue to evaluate available financing opportunities as part of our normal course of business.

4. Recently Adopted Accounting Pronouncements

In October 2009, the FASB issued an update to the revenue recognition topic of the Codification. The update addresses the accounting for multiple-deliverable arrangements to enable vendors to account for products or services (deliverables) separately rather than as a combined unit. This guidance establishes a selling price hierarchy for determining the selling price of a deliverable, which is based on: (a) vendor-specific objective evidence; (b) third-party evidence; or (c) estimates. This guidance also eliminates the residual method of allocation and requires that arrangement consideration be allocated at the inception of the arrangement to all deliverables using the relative selling price method. In addition, this guidance significantly expands required disclosures related to a vendor's multiple-deliverable revenue arrangements. The update 2009-13 is effective prospectively for revenue arrangements entered into or materially modified in fiscal years beginning on or after June 15, 2010 and early adoption is permitted. The adoption of this standard did not have a material impact on our consolidated condensed financial statements.

In April 2010, the FASB issued additional guidance for revenue recognition to provide criteria that should be met for determining whether the milestone method of revenue recognition is appropriate. A vendor can recognize as revenue, in its entirety, consideration that is contingent upon achievement of a milestone in the period in which the milestone is achieved only if the milestone meets all criteria to be considered substantive. The guidance for milestone method of revenue recognition is effective on a prospective basis for milestones achieved in fiscal years, and interim periods within those years, beginning on or after June 15, 2010. The adoption of this standard did not have a material impact on our consolidated condensed financial statements.

5. Short-Term Investments

We invest excess cash in money market funds, highly liquid debt instruments of financial institutions and corporations with strong credit ratings, and in United States government obligations. We have established guidelines relative to diversification and maturities to maintain safety and liquidity. These guidelines are periodically reviewed and modified to take advantage of trends in yields and interest rates. After considering current market conditions, and in order to minimize our risk, management has elected to invest all excess funds in money market funds and other highly liquid investments that are appropriately classified as cash equivalents as of March 31, 2011 and December 31, 2010.

6. Restricted Cash and Cash Equivalents

Restricted cash consists of cash and cash equivalents held in a letter of credit account pursuant to a lease agreement entered into on April 2, 2010 for leasing of property at 3020 and 3030 Callan Road, San Diego, California. The lease agreement required us to execute a letter of credit for $350,000 naming the landlord as a beneficiary. The letter of credit was issued in July 2010 and required us to maintain $350,000 as restricted cash for the duration of the lease, which expires October 31, 2015.

7. Warrant Liability

We account for certain common stock purchase warrants with exercise price reset features in accordance with the applicable FASB guidance. Under this guidance, warrants with these reset features that were previously recognized in stockholders' equity (deficit) are now accounted for as fair value liabilities, with changes in fair value now included in net earnings (loss).

The fair value of the liability associated with the warrants with this reset feature increased to $8.5 million as of March 31, 2011, which resulted in a $3.5 million loss from the change in fair value of warrants for the three months ended March 31, 2011

Since these warrants do not qualify for hedge accounting, all future changes in the fair value of the warrants will be recognized currently in earnings until such time as the warrants are exercised or expire. These warrants are not traded in an active securities market, and as such, we estimated the fair value of these warrants using the Black-Scholes option pricing model using the following assumptions:

	As of March 31, 2011	As of December 31, 2010
Expected term	2.37 years	2.61 years
Common stock market price	$ 7.82	$ 5.19
Risk-free interest rate	1.05%	0.82%
Expected volatility	80.74%	86.03%
Resulting fair value (per warrant)	$ 4.24	$ 2.50

Expected volatility is based primarily on historical volatility. Historical volatility was computed using daily pricing observations for recent periods that correspond to the expected term of the warrants. We believe this method produces an estimate that is representative of our expectations of future volatility over the expected term of these warrants. We currently have no reason to believe future volatility over the expected remaining life of these warrants is likely to differ materially from historical volatility. The expected life is based on the remaining term of the warrants. The risk-free interest rate is the interest rate for treasury constant maturity instruments published by the Federal Reserve Board that is closest to the expected term of the warrants.

8. Long-term Debt

On June 11, 2010, we entered into an Amended and Restated Loan and Security Agreement with General Electric Capital Corporation (GECC), Silicon Valley Bank (SVB) and Oxford Finance Corporation (together, the "Lenders"), pursuant to which the Lenders agreed to make a term loan in an aggregate principal amount of up to $20.0 million (Term Loan), subject to the terms and conditions set forth in the Term Loan. On June 14, 2010, the Lenders funded a Term Loan in the principal amount of $20.0 million. The Term Loan accrues interest at a fixed rate of 9.87% per annum. We are required to make monthly payments of interest-only, through March 1, 2011, and are required to repay the principal amount of the Term Loan over a period of twenty-seven (27) consecutive equal monthly installments of principal plus accrued interest, commencing on April 1, 2011. At maturity of the Term Loan, we will also make a final payment equal to 5% ($1,000,000) of the Term Loan. We may incur additional fees if we elect to prepay the Term Loan. In connection with the Term Loan, on June 11, 2010, we issued to the Lenders warrants to purchase up to an aggregate of 101,266 shares of our common stock at an exercise price of $3.95 per share. These warrants are immediately exercisable and will expire on June 11, 2017.

The Term Loan amended and restated the Original Term Loan, of which an aggregate balance of approximately $4.1 million remained outstanding along with a prorated final payment fee of $205,000. The net proceeds of the Term Loan, after payment of lender fees and expenses and the refinancing of the Original Term Loan, were approximately $15.3 million.

We accounted for this amendment to the Original Term Loan as debt modification since the terms of the amended Term Loan and the Original Term Loan were not substantially different and as present value of cash flows of the modified instrument (using a net method of comparing the present value of cash flows related to the lowest common principal balance between the old and the new loans) was within 10% of the original debt instrument. Accordingly, the fees associated with the amended Term Loan of $354,000 and the existing unamortized debt discount from the Original Term Loan of $242,000 will be amortized as an adjustment of interest expense over the remaining term of the Term Loan using the effective interest method.

We allocated the aggregate proceeds of the Term Loan between the warrants and the debt obligations based on their relative fair values. The fair value of the warrants issued to the Lenders is calculated utilizing the Black-Scholes option-pricing model. We are amortizing the relative fair value of the warrants as a discount of $279,000 over the term of the loan using the effective interest method, with an effective interest rate of 14.78%. If the maturity of the debt is accelerated due to an event of default, then the amortization would be accelerated. The Term Loan is collateralized by the tangible assets of the company, and we were in compliance with our financial and non-financial covenants as of March 31, 2011.

9. Revenue Recognition

Product Sales

We recognize revenue from product sales when the following fundamental criteria are met: (i) persuasive evidence of an arrangement exists, (ii) delivery has occurred, (iii) the price to the customer is fixed or determinable and (iv) collection of the resulting accounts receivable is reasonably assured.

For all sales, we use a binding purchase order or a signed agreement as evidence of an arrangement. Revenue for these product sales is recognized upon delivery to the customer, as all risks and rewards of ownership have been substantively transferred to the customer at that point. For sales to customers who arrange for and manage the shipping process, we recognize revenue upon shipment from our facilities. Shipping and handling costs that are billed to our customers are classified as revenue. The customer's obligation to pay and the payment terms are set at the time of delivery and are not dependent on the subsequent use or resale of our products.

For sales prior to January 1, 2011 that included multiple deliverables, we allocated revenue based on the relative fair values of the individual components. When more than one element such as product maintenance or technical support services were included in an arrangement, we allocated revenue between the elements based on each element's relative fair value, provided that each element met the criteria for treatment as a separate unit of accounting (an item is considered a separate unit of accounting if it has value to the customer on a standalone basis and there is objective and reliable evidence of the fair value of the undelivered items). Fair value is generally determined based upon the price charged when the element is sold separately. In the absence of fair value for a delivered element, we allocated revenue first to the fair value of the undelivered elements and allocated the residual revenue to the delivered elements. Fair values for undelivered elements were determined based on vendor-specific objective evidence as well as market participant quotes for similar services. In the absence of fair value for an undelivered element, the arrangement was accounted for as a single unit of accounting, resulting in a deferral of revenue recognition for delivered elements until all undelivered elements have been fulfilled. Deferred service revenue is recognized ratably over the period the services are provided.

Beginning in 2011, for sales that include multiple deliverables, we account for products or services (deliverables) separately rather than as a combined unit. The FASB guidance of the Codification establishes a selling price hierarchy for determining the selling price of a deliverable, which is based on: (a) vendor-specific objective evidence; (b) third-party evidence; or (c) estimates. This guidance also eliminates the residual method of allocation and requires that arrangement consideration be allocated at the inception of the arrangement to all deliverables using the relative selling price method. There would have been no impact to our financial statements in 2010 had we applied this guidance retrospectively. In addition, we have not entered into any sales arrangements with multiple deliverables during the three months ended March 31, 2011.

Concentration of Significant Customers

For the three months ended March 31, 2011, one direct customer and one distributor comprised 29% of our revenue recognized for the quarter. Our Asia-Pacific region sales accounted for 30% of our revenue recognized for the three months ended March 31, 2011. Additionally, one distributor and two direct customers accounted for 43% of total outstanding accounts receivable as of March 31, 2011.

For the three months ended March 31, 2010, our sales were concentrated in three direct customers, which in aggregate comprised 55% of our revenue recognized for the three months ended March 31, 2010. The Asia-Pacific region accounted for 72% of our revenue recognized for the three months ended March 31, 2010. Additionally, two direct customers accounted for 39% of total outstanding accounts receivable as of March 31, 2010.

Research and Development

We earn revenue for performing tasks under research and development agreements with both commercial enterprises, such as Olympus and Senko, and governmental agencies like the National Institutes of Health ("NIH"). Revenue earned under development agreements is classified as either research grant or development revenues depending on the nature of the arrangement. Revenues derived from reimbursement of direct out-of-pocket expenses for research costs associated with grants are recorded as research grant and other within development revenues. Research grant revenue is recorded at the gross amount of the reimbursement. The costs associated with these reimbursements are reflected as a component of research and development expense in our statements of operations. Additionally, research and development arrangements we have with commercial enterprises such as Olympus and Senko are considered a key component of our central and ongoing operations. Accordingly, when recognized, the inflows from such arrangements are presented as revenues in our statements of operations.

We received funds from Olympus and Olympus-Cytori, Inc. during 2005 and 2006. We recorded upfront fees totaling $28,311,000 as deferred revenues, related party. In exchange for these proceeds, we agreed to (a) provide Olympus-Cytori, Inc. an exclusive and perpetual license to our Celution® System device technology and certain related intellectual property, and (b) provide future development contributions related to commercializing the Celution® System platform. The license and development services are not separable and as a result the recognition of this deferred amount requires achievement of service related milestones, under a proportional performance methodology. If and as such revenues are recognized, deferred revenue will be decreased. Proportional performance methodology was elected due to the nature of our development obligations and efforts in support of the Joint Venture ("JV"), including product development activities and regulatory efforts to support the commercialization of the JV products. The application of this methodology uses the achievement of R&D milestones as outputs of value to the JV. We received up-front, non-refundable payments in connection with these development obligations, which we have broken down into specific R&D milestones that are definable and substantive in nature, and which will result in value to the JV when achieved. As our research and development efforts progress, we periodically evaluate, and modify if necessary, the milestone points in our proportional performance model to ensure that revenue recognition accurately reflects our best estimate of substantive value deliverable to the JV. Revenue will be recognized as the above mentioned R&D milestones are completed. Of the amounts received and deferred, we recognized development revenues of $1,231,000 and $2,122,000 for the three months ended March 31, 2011 and 2010, respectively. All related development costs are expensed as incurred and are included in research and development expense on our statements of operations.

Under a Distribution Agreement with Senko, we granted to Senko an exclusive license to sell and distribute certain Thin Film products in Japan. We have also earned or will be entitled to earn additional payments under the Distribution Agreement based on achieving certain defined and substantive research and development milestones.

Of the amounts received and deferred with respect to Senko, we did not recognize any development revenues in the three months ended March 31, 2011 or 2010, respectively.

10. Inventories

Inventories are carried at the lower of cost or market, determined on the first-in, first-out (FIFO) method.

Inventories consisted of the following:

	March 31, 2011	December 31, 2010
Raw materials	$ 2,372,000	$ 2,311,000
Work in process	297,000	410,000
Finished goods	883,000	657,000
	$ 3,552,000	$ 3,378,000

11. Long-Lived Assets

We assess certain long-lived assets, such as property and equipment and intangible assets other than goodwill, for potential impairment when there is a change in circumstances that indicates carrying values of assets may not be recoverable. Such long-lived assets are deemed to be impaired when the undiscounted cash flows expected to be generated by the asset (or asset group) are less than the asset's carrying amount. Any required impairment loss would be measured as the amount by which the asset's carrying value exceeds its fair value, and would be recorded as a reduction in the carrying value of the related asset and a charge to operating expense. During the three months ended March 31, 2011 and 2010, we had no impairment losses associated with our long-lived assets.

12. Share-Based Compensation

During the first quarter of 2011, we issued to our directors, executive officers and certain non-executive employees options to purchase an aggregate of up to 692,500 shares of our common stock, with four-year vesting for our officers and employees and two-year vesting for our directors. The grant date fair value of the awards granted to our officers and employees was $3.46 and to our directors was $3.15 per share. The resulting share-based compensation expense of $2,375,000, net of estimated forfeitures, will be recognized as expense over the respective vesting periods.

We granted 246,225 performance-based restricted stock awards under the 2004 Equity Incentive Plan in February 2011. The awards provide employees until January 1, 2012 to achieve certain performance goals established by the Compensation Committee. The performance goals are weighted based on the following achievements: obtaining certain FDA clearance or approval (40%), achieving a targeted revenue increase for the fiscal year ended December 31, 2011 (20%), and entering into a major collaboration for development and/or commercialization of the Company's products (40%). To the extent that any of the performance goals are partially achieved, the Compensation Committee maintains the discretion to continue the vesting of all or a portion of the awards following January 1, 2012. Once earned, the awards will remain unvested until January 1, 2013. Termination of employment prior to vesting will result in the forfeiture of any earned (as well as unearned) awards. No compensation expense was recognized related to these awards during the three months ended March 31, 2011 because the performance criteria have not been met, nor has the Compensation Committee exercised its discretion in determining if partial awards will be granted. The following table summarizes activity with respect to such awards during the three months ended March 31, 2011:

	Shares	Weighted Average Grant Date Fair Value
Outstanding at January 1, 2011	0	
Granted	246,225	$ 5.82
Vested	0	
Cancelled / Forfeited	0	
Outstanding at March 31, 2011	246,225	$ 5.82
Vested at March 31, 2011	0	

During the first quarter of 2010, we issued to our directors, executive officers and certain non-executive employees options to purchase an aggregate of up to 1,155,000 shares of our common stock, with four-year vesting for our officers and employees and two-year vesting for our directors. The grant date fair value of the awards granted to our officers and employees was $4.07 and to our directors was $4.16 per share. The resulting share-based compensation expense of $4,713,000, net of estimated forfeitures, will be recognized as expense over the respective vesting periods.

13. Loss per Share

Basic per share data is computed by dividing net income or loss applicable to common stockholders by the weighted average number of common shares outstanding during the period. Diluted per share data is computed by dividing net income or loss applicable to common stockholders by the weighted average number of common shares outstanding during the period increased to include, if dilutive, the number of additional common shares that would have been outstanding as calculated using the treasury stock method. Potential common shares were related entirely to outstanding but unexercised options and warrants for all periods presented.

We have excluded all potentially dilutive securities, including unvested performance-based restricted stock, from the calculation of diluted loss per share attributable to common stockholders for the three months ended March 31, 2011 and 2010, as their inclusion would be antidilutive. Potentially dilutive common shares excluded from the calculations of diluted loss per share were 19,649,383 and 18,661,402 for the three month periods ended March 31, 2011 and 2010, respectively.

14. Commitments and Contingencies

We have entered into agreements, which have provisions for cancellation, with various clinical research organizations for pre-clinical and clinical development studies. Under the terms of these agreements, the vendors provide a variety of services including, but not limited to, conducting pre-clinical development research, recruiting and enrolling patients, monitoring studies, and data analysis. Payments under these agreements typically include fees for services and reimbursement of expenses. The timing of payments due under these agreements is estimated based on current schedules of pre-clinical and clinical studies in progress. As of March 31, 2011, we have pre-clinical research study obligations of $148,000 (which are expected to be fully completed within a year) and clinical research study obligations of $13,100,000 ($3,200,000 of which are expected to be completed within a year).

We are subject to various claims and contingencies related to legal proceedings. Due to their nature, such legal proceedings involve inherent uncertainties including, but not limited to, court rulings, negotiations between affected parties, and governmental actions. Management assesses the probability of loss for such contingencies and accrues a liability and/or discloses the relevant circumstances, as appropriate. Management believes that any liability to us or other remedy that may arise as a result of currently pending legal proceedings will not have a material adverse effect on our financial condition, liquidity, or results of operations as a whole.

During 2008, we entered into a supply agreement with minimum purchase requirements clause. As of March 31, 2011, we have remaining minimum purchase obligations of $875,000, all of which is expected to be completed within a year.

During 2010, we entered into lease of 60,118 square feet at 3020 and 3030 Callan Road, San Diego, California. The related lease agreement bears monthly rent at a rate of $1.75 per square foot, with annual increase of $0.05 per square foot. The lease term is 64 months, commencing on July 1, 2010 and expiring on October 31, 2015. Additionally, we've entered into several lease agreements for international office locations and corporate housing for our employees on international assignments. As of March 31, 2011, we have remaining lease obligations of $6,699,000 ($1,695,000 of which are expected to be completed within a year).

Refer to note 15 for a discussion of our commitments and contingencies related to our transactions with Olympus, including (a) our obligation to the Joint Venture in future periods and (b) certain put and call rights embedded in the arrangements with Olympus.

15. Transactions with Olympus Corporation

Initial Investment by Olympus Corporation in Cytori

In 2005, we entered into a common stock purchase agreement with Olympus in which we received $11,000,000 in cash proceeds. We received an additional $11,000,000 from Olympus in August 2006 for the issuance of approximately 1,900,000 shares of our common stock at $5.75 per share. We received an additional $6,000,000 from Olympus in August 2008 for the issuance of 1,000,000 unregistered shares of our common stock at $6.00 per share and 500,000 common stock warrants (with an original exercise price of $8.50 per share) under a private placement offering.

As of March 31, 2011, Olympus holds approximately 7.7% of our issued and outstanding shares. Additionally, Olympus has a right, which it has not yet exercised, to designate a director to serve on our Board of Directors.

Formation of the Olympus-Cytori Joint Venture

In 2005, we entered into a joint venture and other related agreements (the "Joint Venture Agreements") with Olympus. The Joint Venture is owned equally by Olympus and us. We have determined that the Joint Venture is a variable interest entity or VIE, but that Cytori is not the VIE's primary beneficiary. Accordingly, we have accounted for our interests in the Joint Venture using the equity method of accounting, since we can exert significant influence over the Joint Venture's operations. At March 31, 2011, the carrying value of our investment in the Joint Venture is $413,000. We are under no obligation to provide additional funding to the Joint Venture, but may choose to do so. During the three months ended March 31, 2011 and 2010, we made no cash contributions to the Joint Venture.

Put/Calls and Guarantees

The Shareholders' Agreement between Cytori and Olympus provides that in certain specified circumstances of our insolvency or if we experience a change in control, Olympus will have the rights to (i) repurchase our interests in the Joint Venture at the fair value of such interests or (ii) sell its own interests in the Joint Venture to Cytori (the "Put") at the higher of (a) $22,000,000 or (b) the Put's fair value.

At March 31, 2011 and December 31, 2010, the estimated fair value of the Put was $880,000 and $1,170,000, respectively. Fluctuations in the Put value are recorded in the consolidated condensed statements of operations as a component of change in fair value of option liabilities. The estimated fair value of the Put has been recorded as a long-term liability in the caption option liability in our consolidated condensed balance sheets.

The valuations of the Put were completed using an option pricing theory based simulation analysis (i.e., a Monte Carlo simulation). The valuations are based on assumptions as of the valuation date with regard to the market value of Cytori and the estimated fair value of the Joint Venture, the expected correlation between the values of Cytori and the Joint Venture, the expected volatility of Cytori and the Joint Venture, the bankruptcy recovery rate for Cytori, the bankruptcy threshold for Cytori, the probability of a change of control event for Cytori, and the risk free interest rate.

The following assumptions were employed in estimating the value of the Put:

	March 31, 2011	December 31, 2010
Expected volatility of Cytori	73.40%	73.00%
Expected volatility of the Joint Venture	73.40%	73.00%
Bankruptcy recovery rate for Cytori	28.00%	28.00%
Bankruptcy threshold for Cytori	$ 5,968,000	$ 5,842,000
Probability of a change of control event for Cytori	3.05%	3.43%
Expected correlation between fair values of Cytori and the Joint Venture in the future	99.00%	99.00%
Risk free interest rate	3.47%	3.30%

The Put has no expiration date. Accordingly, we will continue to recognize a liability for the Put and mark it to market each quarter until it is exercised or until the arrangements with Olympus are amended.

16. Fair Value Measurements

Fair value measurements are market-based measurements, not entity-specific measurements. Therefore, fair value measurements are determined based on the assumptions that market participants would use in pricing the asset or liability. We follow a three-level hierarchy to prioritize the inputs used in the valuation techniques to derive fair values. The basis for fair value measurements for each level within the hierarchy is described below:

- Level 1: Quoted prices in active markets for identical assets or liabilities.

- Level 2: Quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs are observable in active markets.

- Level 3: Valuations derived from valuation techniques in which one or more significant inputs are unobservable in active markets.

The following table provides a summary of the recognized assets and liabilities that we measure at fair value on a recurring basis:

	Balance as of March 31, 2011	Basis of Fair Value Measurements		
		Level 1	Level 2	Level 3
Assets:				
Cash equivalents	$ 33,806,000	$ 33,806,000	$ —	$ —
Liabilities:				
Put option liability	$ (880,000)	$ —	$ —	$ (880,000)
Warrant liability	$ (8,458,000)	$ —	$ (8,458,000)	$ —

	Balance as of December 31, 2010	Basis of Fair Value Measurements		
		Level 1	Level 2	Level 3
Assets:				
Cash equivalents	$ 39,807,000	$ 39,807,000	$ —	$ —
Liabilities:				
Put option liability	$ (1,170,000)	$ —	$ —	$ (1,170,000)
Warrant liability	$ (4,987,000)	$ —	$ (4,987,000)	$ —

We use quoted market prices to determine the fair value of our cash equivalents, which consist of money market funds and therefore these are classified in Level 1 of the fair value hierarchy.

We value our put liability (see note 15) using an option pricing theory based simulation analysis (i.e., a Monte Carlo simulation). Assumptions are made with regard to the market value of Cytori and the estimated fair value of the Joint Venture, the expected correlation between the values of Cytori and the Joint Venture, the expected volatility of Cytori and the Joint Venture, the bankruptcy recovery rate for Cytori, the bankruptcy threshold for Cytori, the probability of a change of control event for Cytori, and the risk free interest rate. Because some of the inputs to our valuation model are either not observable quoted prices or are not derived principally from or corroborated by observable market data by correlation or other means, the put option liability is classified as Level 3 in the fair value hierarchy.

The following table summarizes the change in our Level 3 put option liability value:

Put option liability	Three months ended March 31, 2011	Year ended December 31, 2010
Beginning balance	$ (1,170,000)	$ (1,140,000)
Decrease (increase) in fair value recognized in operating expenses	290,000	(30,000)
Ending balance	$ (880,000)	$ (1,170,000)

Common stock purchase warrants issued in connection with our August 2008 private equity placement do not trade in an active securities market, and as such, we estimate the fair value of these warrants using the Black-Scholes option pricing model in which all significant inputs are observable in active markets, such as common stock market price, volatility, and risk free rate; therefore the warrant liability is classified as Level 2 in the fair value hierarchy. See note 7 for further discussion of fair value for these warrants.

No other assets or liabilities are measured at fair value on a recurring basis, or have been measured at fair value on a non-recurring basis subsequent to initial recognition, on the accompanying consolidated condensed balance sheet as of March 31, 2011.

17. Fair Value

Financial Instruments

We disclose fair value information about all financial instruments, whether or not recognized in the balance sheet, for which it is practicable to estimate fair value. The disclosures of estimated fair value of financial instruments at March 31, 2011 and December 31, 2010, were determined using available market information and appropriate valuation methods. Considerable judgment is necessary to interpret market data and develop estimated fair value. The use of different market assumptions or estimation methods may have a material effect on the estimated fair value amounts.

The carrying amounts for cash and cash equivalents, accounts receivable, inventories, other current assets, accounts payable, accrued expenses and other liabilities approximate fair value due to the short-term nature of these instruments.

We utilize quoted market prices to estimate the fair value of our fixed rate debt, when available. If quoted market prices are not available, we calculate the fair value of our fixed rate debt based on a currently available market rate assuming the loans are outstanding through maturity and considering the collateral. In determining the current market rate for fixed rate debt, a market spread is added to the quoted yields on federal government treasury securities with similar terms to the debt.

At March 31, 2011 and December 31, 2010, the aggregate fair value and the carrying value of the Company's fixed rate debt were as follows:

	March 31, 2011		December 31, 2010	
	Fair Value	Carrying Value	Fair Value	Carrying Value
Fixed rate debt	$ 20,008,000	$ 19,918,000	$ 19,782,000	$ 19,679,000

Carrying value includes $1,082,000 and $1,321,000 of debt discount as of March 31, 2011 and December 31, 2010, respectively.

Nonfinancial Assets and Liabilities

We apply fair value techniques on a non-recurring basis associated with: (1) valuing potential impairment losses related to goodwill which are accounted for pursuant to the authoritative guidance for intangibles—goodwill and other; and (2) valuing potential impairment losses related to long-lived assets which are accounted for pursuant to the authoritative guidance for property, plant and equipment.

All of our goodwill is associated with regenerative cell technology, and we determine the fair value of this reporting unit based on a combination of inputs including the market capitalization of the Company, as well as Level 3 inputs such as discounted cash flows which are not observable from the market, directly or indirectly. We conduct our goodwill impairment analysis annually as of November 30 each year, or upon the occurrence of certain triggering events. No such triggering events occurred during the three months ended March 31, 2011. Historically, the fair value has significantly exceeded the carrying value.

We test for the impairment of our long-lived assets when triggering events occur and such impairment, if any, is measured at fair value. The inputs for fair value of our long lived assets would be based on Level 3 inputs as data used for such fair value calculations would be based on discounted cash flows using market place participant assumptions. No triggering events occurred during the three months ended March 31, 2011.

18. Stockholders' Equity

Common Stock

On June 19, 2009, we entered into a common stock purchase agreement with Seaside 88, LP relating to the offering and sale of a total of up to 7,150,000 shares of our common stock. The agreement required us to issue and Seaside to buy 275,000 shares of our common stock once every two weeks, subject to the satisfaction of customary closing conditions. Upon completion of our scheduled closings pursuant to the agreement with Seaside 88, LP in June 2010, we raised approximately $30,172,000 in aggregate gross proceeds from this transaction from the sale of 7,150,000 shares of our common stock between June 2009 and June 2010, of which $17,314,000 in gross proceeds from the sale of 3,300,000 shares was raised during 2010. We have accounted for each of the completed closings as a component of stockholders' equity.

In October 2010, we entered into an underwriting agreement with Jefferies & Company, relating to the issuance and sale of 4,600,000 shares of our common stock. This price to the public in this offering was $4.50 per share and the underwriter agreed to purchase the shares from us at a price of $4.23 per share. The transaction was completed on October 13, 2010, raising approximately $20,700,000 in gross proceeds before deducting underwriting discounts and commissions and other offering expenses payable by us.

On December 13, 2010 we raised $10,000,000 in gross proceeds from a sale of 1,428,571 shares of unregistered common stock to Astellas Pharma Inc. for $7.00 per share in a private stock placement. Pursuant to the terms of the purchase agreement, we granted Astellas Pharma Inc. a two year right of first refusal to enter into a development and commercialization collaboration with us regarding the use of our technology, on a worldwide basis, for the treatment of liver conditions. In addition, we have agreed to use reasonable efforts to file a registration statement with the Securities and Exchange Commission to register the shares of common stock for resale upon the request of Astellas Pharma Inc. We also granted Astellas Pharma Inc. a non-voting observer seat on our Board of Directors and the right to designate a representative member to our Scientific Advisory Board. The $10,000,000 in total proceeds we received exceeded the market value of our stock at the completion of the purchase agreement. The $2,526,000 difference between the proceeds received and the fair market values of our common stock was recorded as a component of deferred revenues in the accompanying balance sheets. This difference was recorded as deferred revenue since, conceptually, the excess proceeds represent a value paid by Astellas Pharma Inc. attributable to the scientific advisory board seat, the non-voting observer seat on our Board of Directors, and the two year right of first refusal to enter into a development and commercialization collaboration with us regarding the use of our technology, on a worldwide basis, for the treatment of liver conditions, rather than an additional equity investment in Cytori. The recognition of this deferred amount is expected to occur upon the earlier of the expiration of the two year period or the termination of the agreement.

Warrant Adjustments

Our closings with Seaside 88, LP through June 7, 2010, our October 2010 offering of 4,600,000 shares of our common stock and our December 2010 sale of 1,428,571 shares of our common stock triggered an adjustment to the exercise price and number of shares issuable under the warrants issued to investors in our August 2008 private placement financing. As a result, as of March 31, 2011, the common stock warrants issued on August 11, 2008 are currently exercisable for 1,994,758 shares of our common stock at an exercise price of $6.02 per share.

Other Related Party Transactions

As of March 31, 2011 and December 31, 2010, Green Hospital Supply, Inc., our distribution partner in Japan and a related party, was a beneficial owner of more than five percent of our outstanding shares of common stock.

During the three months ended March 31, 2011 and 2010, we incurred approximately $28,000 and $56,000, respectively, in royalty costs in connection with our sales of our Celution® 800/CRS System products to the European and Asia-Pacific reconstructive surgery market, pursuant to our License and Royalty Agreement with the Olympus -Cytori, Inc. joint venture, respectively. As of March 31, 2011, and December 31, 2010, Olympus Corporation was a beneficial owner of more than five percent of our outstanding shares of common stock.

19. Subsequent Events

We have evaluated events after the balance sheet date of March 31, 2011 and up to the date we filed this report.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Our Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) includes the following sections:

- Overview that discusses our operating results and some of the trends that affect our business.
- Results of Operations that includes a more detailed discussion of our revenue and expenses.
- Liquidity and Capital Resources which discusses key aspects of our statements of cash flows, changes in our financial position and our financial commitments.
- Significant changes since our most recent Annual Report on Form 10-K in the Critical Accounting Policies and Significant Estimates that we believe are important to understanding the assumptions and judgments underlying our financial statements.

You should read this MD&A in conjunction with the financial statements and related notes in Item 1 and our Annual Report on Form 10-K for the fiscal year ended December 31, 2010.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This report contains certain statements that may be deemed "forward-looking statements" within the meaning of United States of America securities laws. All statements, other than statements of historical fact, that address activities, events or developments that we intend, expect, project, believe or anticipate and similar expressions or future conditional verbs such as will, should, would, could or may occur in the future are forward-looking statements. Such statements are based upon certain assumptions and assessments made by our management in light of their experience and their perception of historical trends, current conditions, expected future developments and other factors they believe to be appropriate.

These statements include, without limitation, statements about our anticipated expenditures, including those related to clinical research studies and general and administrative expenses; the potential size of the market for our products, future development and/or expansion of our products and therapies in our markets, our ability to generate product revenues or effectively manage our gross profit margins; our ability to obtain regulatory clearance; expectations as to our future performance; the "Liquidity and Capital Resources" section of this report, including our potential need for additional financing and the availability thereof; and the potential enhancement of our cash position through development, marketing, and licensing arrangements. Our actual results will likely differ, perhaps materially, from those anticipated in these forward-looking statements as a result of various factors, including: our need and ability to raise additional cash, our joint ventures, risks associated with laws or regulatory requirements applicable to us, market conditions, product performance, unforeseen litigation, and competition within the regenerative medicine field, to name a few. The forward-looking statements included in this report are subject to a number of additional material risks and uncertainties, including but not limited to the risks described our filings with the Securities and Exchange Commission and under the "Risk Factors" section in Part II below.

We encourage you to read our Risk Factors descriptions carefully. We caution you not to place undue reliance on the forward-looking statements contained in this report. These statements, like all statements in this report, speak only as of the date of this report (unless an earlier date is indicated) and we undertake no obligation to update or revise the statements except as required by law. Such forward-looking statements are not guarantees of future performance and actual results will likely differ, perhaps materially, from those suggested by such forward-looking statements.

Overview

Cytori develops, manufactures, and commercializes innovative medical devices, which enable physicians to practice regenerative medicine worldwide. We have invested more than $200 million into the design and development of our core device, the Celution® System. This device offers patients real-time access to the stem and regenerative cells residing naturally within their own adipose (fat) tissue. These stem and regenerative cells may potentially be used across multiple diseases or conditions resulting from a lack of blood supply (ischemia). Two areas where we are concentrating our efforts include: 1) soft tissue enhancement and defect repair; and 2) cardiovascular disease.

The primary business model is based on the sale of our systems and single-use cartridges, which generate recurring revenues on a per-procedure, single-use basis. Cytori is actively selling three product lines:

- The Celution® family, which is approved in Europe with a CE Mark designation. The approved indications for use include processing of adipose tissue to extract stem and progenitor cells for the re-implantation into the same patient for breast reconstruction, aesthetic body contouring, and treatment of certain wounds related to Crohn's fistulas.
- The PureGraft™ family of products, which are approved in the U.S. and Europe for the preparation of autologous fat grafts for use in aesthetic body contouring, and;

- The StemSource® family of laboratory equipment, which is available worldwide for use in research and stem cell banking.

Cytori's commercial strategy is to focus primarily on selling our approved products into the cosmetic and reconstructive surgery (CRS) market. We believe these areas can be successfully penetrated more quickly than our other target markets. Sales from our current commercial activities will be driven by garnering coverage by government and private payors in Europe for breast reconstruction and capitalizing and facilitating growing visibility for autologous fat grafting.

We believe it is strategically valuable to invest a significant portion of our research and development efforts and resources into seeking Celution® System indications-for-use in cardiovascular disease worldwide. We have completed two European clinical trials, one for chronic myocardial ischemia and one for acute myocardial infarction. Based on the outcomes from these studies, we are seeking an indication-for-use in Europe for no-option chronic myocardial ischemia patients. If we were to receive an indication-for-use in these no-option patients, we would begin offering the device to select European hospitals which would involve a related investment in sales and marketing activities. Additionally, we have commenced a pivotal study in Europe investigating the use of the device and its cell output as a treatment for heart attacks which will enroll up to 370 patients.

We also offer two ancillary product lines. Our PureGraft™ product line for autologous fat grafting is complementary to our cosmetic and reconstructive surgery business. The StemSource® offering is strategically important as it is being used by researchers to develop therapeutic applications we have neither the resources nor bandwidth to pursue. Alternatively, the product is being sold as lab equipment which may be integrated into a comprehensive cell and tissue bank at the customer's facility or for the purposes of research. Over time, we anticipate these products will represent a smaller percentage of our overall revenues.

As we move forward in 2011, we will continue to seek various expanded regulatory and marketing approvals of the Celution® System family of products in the United States, Europe and Asia Pacific. In the U.S. we are pursuing three parallel strategies, which include the aforementioned goal of commencing a U.S. cardiac PMA study, a trial for soft-tissue repair, and several class II 510(K) applications. We are also anticipating European approval for and launch of the next-generation Celution® System, Celution® One, which has been designed and will be manufactured by the Olympus-Cytori Joint Venture. This version of the system is tailored for the hospital market and offers faster processing times with a greater cell yield. We are also seeking to register or gain market approval for our products in various emerging markets, including Asia and South America.

Olympus Partnership

On November 4, 2005, we entered into a strategic development and manufacturing joint venture agreement and other related agreements with Olympus. As part of the terms of the JV Agreements, we formed a joint venture, Olympus-Cytori, Inc. (Joint Venture), to develop and manufacture future generation devices based on our Celution® System platform.

Under the Joint Venture Agreements:

- Olympus paid $30,000,000 for its 50% interest in the Joint Venture. Moreover, Olympus simultaneously entered into a License/Joint Development Agreement with the Joint Venture and us to develop a second generation commercial system and manufacturing capabilities.

- We licensed our device technology, including the Celution® System platform and certain related intellectual property, to the Joint Venture for use in future generation devices. These devices will process and purify adult stem and regenerative cells residing in adipose (fat) tissue for various therapeutic clinical applications. In exchange for this license, we received a 50% interest in the Joint Venture, as well as an initial $11,000,000 payment from the Joint Venture; the source of this payment was the $30,000,000 contributed to the Joint Venture by Olympus. Moreover, upon receipt of a CE mark for the first generation Celution® System platform in January 2006, we received an additional $11,000,000 development milestone payment from the Joint Venture.

Put/Calls and Guarantees

The Shareholders' Agreement between Cytori and Olympus provides that in certain specified circumstances of insolvency or if we experience a change in control, Olympus will have the rights to (i) repurchase our interests in the Joint Venture at the fair value of such interests or (ii) sell its own interests in the Joint Venture to Cytori (the "Put") at the higher of (a) $22,000,000 or (b) the Put's fair value.

As of March 31, 2011, the estimated fair value of the Put was $880,000. Fluctuations in the estimated Put value are recorded in the statements of operations as a component of change in fair value of option liability. The estimated fair value of the Put has been recorded as a long-term liability on the consolidated condensed balance sheets in the caption option liability.

The Put has no expiration date. Accordingly, we will continue to recognize a liability for the Put and mark it to market each quarter until it is exercised or until the arrangements with Olympus are amended.

Olympus-Cytori Joint Venture

The Joint Venture currently has exclusive access to our Celution® System device technology for the development, manufacture, and supply of such systems to us. Once a second generation Celution® System is developed and approved by regulatory agencies, the Joint Venture will exclusively supply us with these systems at a formula-based transfer price. We have retained all marketing rights (subject to our various distribution agreements) to sell the Celution® System devices for all therapeutic applications of adipose stem and regenerative cells.

We have worked closely with Olympus' team of scientists and engineers to design the future generations of the Celution® System so that it will contain certain product enhancements and that can be manufactured in a streamlined manner.

In August 2007, we entered into a License and Royalty Agreement with the Joint Venture which provides us the ability to commercially launch the Celution® System platform earlier than we could have otherwise done so under the terms of the Joint Venture Agreements. The Royalty Agreement allows us to manufacture the Cytori-developed Celution® System platform, including the Celution® 800/CRS, until such time as the Joint Venture's products are commercially available for the same market served by the Cytori platform, subject to a reasonable royalty that will be payable to the Joint Venture for all such sales.

We account for our investment in the Joint Venture under the equity method of accounting.

Other Related Party Transactions

In August 2008, we received $6,000,000 from Olympus in a private placement of 1,000,000 unregistered shares of our common stock and a warrant to purchase an additional 500,000 shares of our common stock at an original exercise price of $8.50 per share. The purchase price was $6.00 per unit (with each unit consisting of one share and 50% warrant coverage). The warrant is exercisable anytime after February 11, 2009 and will expire on August 11, 2013.

Thin Film Japan Distribution Agreement

In 2004, we sold the majority of our Thin Film business to MAST Biosurgery AG (MAST). We retained all rights to Thin Film business in Japan (subject to a purchase option of MAST, which expired in May 2007), and we received back from MAST a license of all rights to Thin Film technologies in the spinal field, exclusive at least until 2012, and the field of regenerative medicine, non-exclusive on a perpetual basis.

In the third quarter of 2004, we entered into a Distribution Agreement with Senko Medical Trading Company (Senko). Under this agreement, we granted to Senko an exclusive license to sell and distribute certain Thin Film products in Japan. Specifically, the license covers Thin Film products with the following indications: anti-adhesion; soft tissue support; and minimization of the attachment of soft tissues. The Distribution Agreement with Senko commences upon "commercialization." Commercialization will occur when one or more Thin Film product registrations are completed with the Japanese Ministry of Health, Labour and Welfare, or MHLW. Following commercialization, the Distribution Agreement has a duration of five years and is renewable for an additional five years after reaching mutually agreed minimum purchase guarantees.

We received a $1,500,000 upfront license fee from Senko. We have recorded the $1,500,000 received as a component of deferred revenues in the accompanying consolidated condensed balance sheet. Half of the license fee is refundable if the parties agree commercialization is not achievable and a proportional amount is refundable if we terminate the arrangement, other than for material breach by Senko, before three years post-commercialization.

Under the Distribution Agreement, we will also be entitled to earn additional payments from Senko based on achieving defined milestones. On September 28, 2004, we notified Senko of completion of the initial regulatory application to the MHLW for the Thin Film product. As a result, we became entitled to a nonrefundable payment of $1,250,000, which we received in October 2004 and recorded as a component of deferred revenues. We did not recognize any development revenues with respect to Senko during the three months ended March 31, 2011 or 2010. To date we have recognized a total of $371,000 in development revenues (all of which was recognized prior to 2008) related to this agreement.

Results of Operations

Our overall net losses for the three months ended March 31, 2011 and 2010 were $12,072,000 and $2,447,000, respectively. The increase in net loss during the current period is primarily due to the non-cash fair value estimates of our warrant liability, which changed from a gain of $2,167,000 in 2010 to a loss of $3,471,000 in the current period. Other operating expenses increased $1,805,000 from the comparable three month period in 2010. In addition, product revenue and non-cash development revenue decreased, and interest expense increased, in 2011.

Product revenues

Product revenues consisted of revenues primarily from our Celution® System products and StemSource® Cell Banks.

The following table summarizes the components for the three months ended March 31, 2011 and 2010:

	For the three months ended March 31,	
	2011	2010
Related party	$ —	$ —
Third party	1,362,000	2,266,000
Total product revenues	$ 1,362,000	$ 2,266,000

Beginning in March of 2008, we began sales and shipments of our Celution® 800/CRS System to the European and Asia-Pacific reconstructive surgery markets and during 2010 we began sales of our PureGraft™ System in the United States and Europe. Assuming all other applicable revenue recognition criteria have been met, revenue for these product sales is recognized upon delivery to the customer, as all risks and rewards of ownership have been substantively transferred to the customer at that point. For product sales to customers who arrange for and manage all aspects of the shipping process, we recognize revenue upon shipment from our facilities. For product sales that include a combination of equipment, services, or other multiple deliverables that will be provided in the future, we defer an estimate of the fair value of those future deliverables from product revenue until such deliverables have been provided or earned. Shipping and handling costs that are billed to our customers are classified as revenue.

Our product sales in the current quarter were significantly impacted by the major earthquake, tsunami and the aftermath that occurred in Japan in March. A significant portion of our customer base is located in Japan and thus the natural disaster affected our sales in the quarter.

The future: We expect product sales in Japan to improve as the country recovers from the March disaster. We expect to continue to generate product revenues from Celution® 800/CRS and consumable sales in Europe and we expect to continue to generate product revenues from StemSource® Cell Bank sales and Celution® System translational medical sales in Japan through direct sales and through our distribution partner Green Hospital Supply, from StemSource® banking and research products in the United States and elsewhere through direct sales and through our distribution partner GE Healthcare, and we also expect to generate PureGraft™ System sales in the US and Europe. Additionally, we expect to have Thin Film product revenues, pending regulatory approval, when commercialization of the Thin Film products in Japan occurs and we begin Thin Film shipments to Senko.

Cost of product revenues

Cost of product revenues relate primarily to Celution® System products and StemSource® Cell Banks and includes material, manufacturing labor, and overhead costs. The following table summarizes the components of our cost of revenues for the three months ended March 31, 2011 and 2010:

	For the three months ended March 31,	
	2011	2010
Cost of product revenues	$ 825,000	$ 915,000
Share-based compensation	17,000	15,000
Total cost of product revenues	$ 842,000	$ 930,000
Total cost of product revenues as % of product revenues	61.8%	41.0%

- Cost of product revenues as a percentage of product revenues was 61.8% and 41.0% for the three months ended March 31, 2011 and 2010, respectively. Fluctuation in this percentage is to be expected due to the product mix, distributor and direct sales mix, and overhead allocation.

The future. We expect to continue to see variation in our gross profit margin as the product mix comprising revenues fluctuates. Additionally, we expect to incur costs related to our MacroPore products if and when commercialization is achieved for our Japan Thin Film product line.

Development revenues

The following table summarizes the components of our development revenues for the three months ended March 31, 2011 and 2010:

	For the three months ended March 31,	
	2011	2010
Development (Olympus)	$ 1,231,000	$ 2,122,000
Research grant (NIH)	—	—
Service plan and other	4,000	21,000
Total development revenues	$ 1,235,000	$ 2,143,000

We recognize deferred revenues, related party, as development revenue when certain performance obligations are met (i.e., using a proportional performance approach). During the quarter ended March 31, 2011, we recognized $1,231,000 of revenue associated with our arrangements with Olympus as a result of achieving a product development milestone related to the preproduction development of the next-generation Celution® One System. During the quarter ended March 31, 2010, we recognized $2,122,000 of revenue associated with our arrangements with Olympus as a result of achieving two milestones, one in product development, and one clinical milestone related to the assessment of trial outcomes at 6 months in one of our cardiac trials.

The future. We may recognize additional development revenues during 2011, as the anticipated completion for the next milestone of our Joint Venture and other Olympus performance obligations is in 2011. If we are successful in completing these activities, we may recognize approximately $400,000 in development revenues during 2011. The exact timing of when amounts will be reported in revenue will depend on internal factors (for instance, our ability to complete certain contributions and obligations that we have agreed to perform) as well as external considerations, including obtaining certain regulatory clearances and/or approvals related to the Celution® System. The cash for these contributions and obligations was received when the agreement was signed and no further related cash payments will be made to us.

We will continue to recognize revenue from the Thin Film development work we are performing on behalf of Senko, based on the relative fair value of the milestones completed as compared to the total efforts expected to be necessary to obtain regulatory clearance from the MHLW. We are still awaiting regulatory clearance from the MHLW in order for initial commercialization to occur. Accordingly, we expect to recognize approximately $1,129,000 (consisting of $879,000 in deferred revenues plus a non-refundable payment of $250,000 to be received upon commercialization) in revenues associated with this milestone arrangement if and when regulatory approval is achieved. Moreover, we expect to recognize $500,000 per year associated with deferred Senko license fees over a three-year period following commercialization, if achieved, as the refund rights associated with the license payment expire.

Research and development expenses

Research and development expenses include costs associated with the design, development, testing and enhancement of our products, regulatory fees, the purchase of laboratory supplies, pre-clinical studies and clinical studies. The following table summarizes the components of our research and development expenses for the three months ended March 31, 2011 and 2010:

	For the three months ended March 31,	
	2011	2010
General research and development	$ 2,572,000	$ 1,699,000
Development milestone (Joint Venture)	356,000	428,000
Share-based compensation	119,000	118,000
Total research and development expenses	$ 3,047,000	$ 2,245,000

Research and development expenses relate to the development of a technology platform that involves using adipose tissue as a source of autologous regenerative cells for therapeutic applications. These expenses, in conjunction with continued development efforts related to our Celution® System, result primarily from the broad expansion of our research and development efforts enabled by the funding we received from Olympus in 2005 and 2006 and from other investors during the last few years.

The increase in research and development expenses for the three months ended March 31, 2011 as compared to the same period in 2010 is primarily due to the initiation of our ADVANCE cardiac trial in Europe.

Expenditures related to the Joint Venture with Olympus, which are included in the variation analysis above, include costs that are necessary to support the commercialization of future generation devices, including the next generation Celution® System. These development activities, which began in November 2005, include performing pre-clinical and clinical studies, seeking regulatory approval, and performing product development related to therapeutic applications for adipose stem and regenerative cells for multiple large markets. The following table summarizes the components of our Joint Venture expenses for the quarters ended March 31, 2011, and 2010:

	For the three months ended March 31,	
	2011	2010
Labor and related benefits	$ 209,000	$ 265,000
Consulting and other professional services	142,000	155,000
Supplies	—	1,000
Other miscellaneous	5,000	7,000
Total	$ 356,000	$ 428,000

The future: We expect research and development expenditures to increase in 2011 as we are scheduled to begin enrollment in the ADVANCE cardiac trial in the first half of 2011.

Sales and marketing expenses

Sales and marketing expenses include costs of marketing personnel, tradeshows, physician training, and promotional activities and materials. The following table summarizes the components of our sales and marketing expenses for the three months ended March 31, 2011 and 2010:

	For the three months ended March 31,	
	2011	2010
International sales and marketing	$ 2,979,000	$ 1,808,000
Share-based compensation	247,000	191,000
Total sales and marketing expenses	$ 3,226,000	$ 1,999,000

The increase in sales and marketing expense for the three months ended March 31, 2011 as compared to the same period in 2010 was mainly attributed to the increase in salary and related benefits expense (excluding share-based compensation) of $660,000, an increase in travel related expenses of $101,000, increased promotional expenses of $88,000 and an increase in professional services of $152,000, which are due to our emphasis in seeking strategic alliances and/or co-development partners.

The future. We expect sales and marketing expenditures related to the regenerative cell technology to increase as we continue to expand our base of distribution partners, strategic alliances and co-development partners, as well as our direct marketing sales force for our Celution® System and StemSource® Cell Bank.

General and administrative expenses

General and administrative expenses include costs for administrative personnel, legal and other professional expenses, and general corporate expenses. The following table summarizes the general and administrative expenses for the three months ended March 31, 2011 and 2010:

	For the three months ended March 31,	
	2011	2010
General and administrative	$ 3,046,000	$ 2,776,000
Share-based compensation	498,000	442,000
Total general and administrative expenses	$ 3,544,000	$ 3,218,000

The increase in general and administrative expenses (excluding share-based compensation) for the three months ended March 31, 2011 as compared to the same period in 2010 was due primarily due to an increase in professional services (such as consulting and compliance expenses) of $305,000.

The future. We expect general and administrative expenses to stay at approximately the same level in 2011 as in the prior year.

Share-based compensation expenses

Stock-based compensation expenses include charges related to options issued to employees, directors and non-employees. We measure stock-based compensation expense based on the grant-date fair value of any awards granted to our employees. Such expense is recognized over the period of time that employees provide service to us and earn all rights to the awards.

The following table summarizes the components of our share-based compensation expenses for the three months ended March 31, 2011 and 2010:

	For the three months ended March 31,	
	2011	2010
Cost of product revenues	$ 17,000	$ 15,000
Research and development-related	119,000	118,000
Sales and marketing-related	247,000	191,000
General and administrative-related	498,000	442,000
Total share-based compensation expenses	$ 881,000	$ 766,000

Most of the share-based compensation expenses in the three months ended March 31, 2011 and 2010 related to the vesting of stock option awards to employees.

During the first quarter of 2011, we issued to our directors, executive officers and certain non-executive employees options to purchase an aggregate of up to 692,500 shares of our common stock, with four-year vesting for our officers and employees and two-year vesting for our directors. The grant date fair value of the awards granted to our officers and employees was $3.46 and to our directors was $3.15 per share. The resulting share-based compensation expense of $2,375,000, net of estimated forfeitures, will be recognized as expense over the respective vesting periods.

We granted 246,225 performance-based restricted stock awards under the 2004 Equity Incentive Plan in February 2011. The awards provide employees until January 1, 2012 to achieve certain performance goals established by the Compensation Committee. The performance goals are weighted based on the following achievements: obtaining certain FDA clearance or approval (40%), achieving a targeted revenue increase for the fiscal year ended December 31, 2011 (20%), and entering into a major collaboration for development and/or commercialization of the Company's products (40%). To the extent that any of the performance goals are partially achieved, the Compensation Committee maintains the discretion to continue the vesting of all or a portion of the awards following January 1, 2012. Once earned, the awards will remain unvested until January 1, 2013. Termination of employment prior to vesting will result in the forfeiture of any earned (as well as unearned) awards. No compensation expense was recognized related to these awards during the three months ended March 31, 2011 because the performance criteria have not been met, nor has the Compensation Committee exercised its discretion in determining if partial awards will be granted. The following table summarizes activity with respect to such awards during the three months ended March 31, 2011:

	Shares	Weighted Average Grant Date Fair Value
Outstanding at January 1, 2011	0	
Granted	246,225	$ 5.82
Vested	0	
Cancelled / Forfeited	0	
Outstanding at March 31, 2011	246,225	$ 5.82
Vested at March 31, 2011	0	

During the first quarter of 2010, we issued to our directors, executive officers and certain non-executive employees options to purchase an aggregate of up to 1,155,000 shares of our common stock, with four-year vesting for our officers and employees and two-year vesting for our directors. The grant date fair value of the awards granted to our officers and employees was $4.07 and to our directors was $4.16 per share. The resulting share-based compensation expense of $4,713,000, net of estimated forfeitures, will be recognized as expense over the respective vesting periods.

The future. We expect to continue to grant options (which will result in an expense) to our employees, directors, and, as appropriate, to non-employee service providers. In addition, previously-granted options will continue to vest in accordance with their original terms. As of March 31, 2011, the total compensation cost related to non-vested stock options not yet recognized for all our plans is approximately $8,699,000. These costs are expected to be recognized over a weighted average period of 1.86 years.

Change in fair value of warrant liability

The following is a table summarizing the change in fair value of our warrant liability for the three months ended March 31, 2011 and 2010:

	For the three months ended March 31,	
	2011	2010
Change in fair value of warrants	$ 3,471,000	$ (2,167,000)

The future. Future changes in the fair value of the warrant liability will be recognized currently in earnings until such time as the warrants are exercised or expire.

Change in fair value of option liability

The following is a table summarizing the change in fair value of our put option liability for the three months ended March 31, 2011 and 2010:

	For the three months ended March 31,	
	2011	2010
Change in fair value of option liability	$ (290,000)	$ 260,000

The future. The Put has no expiration date. Accordingly, we will continue to recognize a liability for the Put until it is exercised or until the arrangements with Olympus are amended.

Financing items

The following table summarizes interest income, interest expense, and other income and expense for the three months ended March 31, 2011 and 2010:

	For the three months ended March 31,	
	2011	2010
Interest income	$ 2,000	$ 1,000
Interest expense	(738,000)	(276,000)
Other income (expense)	(47,000)	(75,000)
Total	$ (783,000)	$ (350,000)

- Interest income remained comparable for the three months ended March 31, 2011 as compared to the same period in 2010.

- Interest expense increased for the three months ended March 31, 2011 as compared to the same period in 2010 due to cash interest and non-cash amortization of debt issuance costs and debt discount for our $20.0 million term loan. During the second quarter of 2010, we entered into an Amended and Restated Loan and Security Agreement, pursuant to which the lenders funded a term loan in the amount of $20.0 million on June 14, 2010, and which refinanced the remaining balance of the term loan from 2008.

- The changes in other income (expense) in the three months ended March 31, 2011 as compared to the same period in 2010 resulted primarily from changes in foreign currency exchange rates.

The future. Interest income earned in the remainder of 2011 will be dependent on our levels of funds available for investment as well as general economic conditions. Subject to our future financing activities, we expect interest expense for the remainder of 2011 to increase as we continue to pay interest on the $20.0 million term loan that funded in June 2010.

Equity loss from investment in Joint Venture

The following table summarizes our equity loss from investment in joint venture for the three months ended March 31, 2011 and 2010:

	For the three months ended March 31,	
	2011	2010
Equity loss from investment in joint venture	$ (46,000)	$ (21,000)

The losses relate entirely to our 50% equity interest in the Joint Venture, which we account for using the equity method of accounting.

The future. We do not expect to recognize significant losses from the activities of the Joint Venture in the foreseeable future. Over the next one to two years, the Joint Venture is expected to incur labor costs related to the development of our second generation commercial system as well as general and administrative expenses, offset by royalty and other revenue expected to be generated by our current Celution® 800/CRS and future generation devices. Though we have no obligation to do so, we plan to contribute funding to the Joint Venture to cover any costs should the Joint Venture deplete its cash balance.

Liquidity and Capital Resources

Short-term and long-term liquidity

The following is a summary of our key liquidity measures at March 31, 2011 and December 31, 2010:

	March 31, 2011	December 31, 2010
Cash and cash equivalents	$ 42,647,000	$ 52,668,000
Current assets	$ 48,937,000	$ 58,953,000
Current liabilities	14,640,000	13,223,000
Working capital	$ 34,297,000	$ 45,730,000

We incurred net losses of $12,072,000 and $2,447,000 for the three months ended March 31, 2011 and 2010, respectively. We have an accumulated deficit of $222,070,000 as of March 31, 2011. Additionally, we have used net cash of $10,564,000 and $7,404,000 to fund our operating activities for the three months ended March 31, 2011 and 2010, respectively. To date these operating losses have been funded primarily from outside sources of invested capital.

Management recognizes the need to generate positive cash flows in future periods and/or to obtain additional capital from various sources. In the continued absence of positive cash flows from operations, no assurance can be given that we can generate sufficient revenue to cover operating costs or that additional financing will be available to us and, if available, on terms acceptable to us in the future.

During 2011 and 2010, we expanded our commercialization activities while simultaneously pursuing available financing sources to support operations and growth. We have had, and continue to have, an ongoing need to raise additional cash from outside sources to fund our operations. If we cannot do so, we would be required to reduce our research, development, and administrative operations, including reductions of our employee base, in order to offset lack of available funding. We continue to evaluate available financing opportunities as part of our normal course of business.

The following summarizes our contractual obligations and other commitments at March 31, 2011, and the effect such obligations could have on our liquidity and cash flow in future periods:

	Payments due by period				
Contractual Obligations	**Total**	**Less than 1 year**	**1 – 3 years**	**3 – 5 years**	**More than 5 years**
Long-term obligations	$ 21,129,000	$ 8,915,000	$ 12,190,000	$ 24,000	$ —
Interest commitment on long-term obligations	2,389,000	1,620,000	768,000	1,000	—
Operating lease obligations	6,699,000	1,695,000	2,798,000	2,206,000	—
Minimum purchase requirements	875,000	875,000	—	—	—
Pre-clinical research study obligations	148,000	148,000	—	—	—
Clinical research study obligations	13,100,000	3,200,000	9,900,000	—	—
Total	$ 44,340,000	$ 16,453,000	$ 25,656,000	$ 2,231,000	$ —

Cash (used in) provided by operating, investing, and financing activities for the three months ended March 31, 2011 and 2010 is summarized as follows:

	For the three months ended March 31,	
	2011	**2010**
Net cash used in operating activities	$ (10,564,000)	$ (7,404,000)
Net cash used in investing activities	(131,000)	(191,000)
Net cash provided by financing activities	674,000	17,425,000

Operating activities

Operational activities, inclusive of research and development, sales and marketing, and general and administrative efforts, offset in part by product sales, generated an operating loss of $11,243,000 for the three months ended March 31, 2011. The operating cash impact of this loss was $10,564,000, after adjusting for the recognition of non-cash development revenue of $1,231,000, the consideration of non-cash share-based compensation, other adjustments for material non-cash activities, such as depreciation, amortization, change in fair value of option and warrant liabilities, and changes in working capital due to timing of product shipments (accounts receivable) and payment of liabilities.

Research and development and sales and marketing efforts and other operational activities, offset in part by product sales, recognition of deferred revenue, related party and gain from change in fair value of warrants, generated an operating loss of $2,076,000 for the three months ended March 31, 2010. The operating cash impact of this loss was $7,404,000, after adjusting for the recognition of $2,122,000 of deferred revenue, the consideration of non-cash share-based compensation, other adjustments for material non-cash activities, such as depreciation, amortization, change in fair value of option and warrant liabilities, and changes in working capital due to timing of product shipments (accounts receivable) and payment of liabilities.

Investing activities

Net cash used in investing activities for the three months ended March 31, 2011 and 2010 resulted from cash outflows for purchases of property and equipment.

Financing Activities

The net cash provided by financing activities for the three months ended March 31, 2011 related to proceeds from exercise of warrants and employee stock options of $674,000.

The net cash provided by financing activities for the three months ended March 31, 2010 related primarily to a sale of 1,925,000 shares for approximately $11,376,000 in gross proceeds in connection with common stock purchase agreement with Seaside entered into on June 19, 2009 and proceeds from exercise of warrants and employee stock options of $7,038,000.

Critical Accounting Policies and Significant Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires us to make estimates and assumptions that affect the reported amounts of our assets, liabilities, revenues and expenses, and that affect our recognition and disclosure of contingent assets and liabilities.

While our estimates are based on assumptions we consider reasonable at the time they were made, our actual results may differ from our estimates, perhaps significantly. If results differ materially from our estimates, we will make adjustments to our financial statements prospectively as we become aware of the necessity for an adjustment.

We believe it is important for you to understand our most critical accounting policies. These are our policies that require us to make our most significant judgments and, as a result, could have the greatest impact on our future financial results.

Warrant Liability

Effective January 1, 2009, we changed our method of accounting for certain common stock purchase warrants with exercise price reset features due to the adoption of a new accounting standard. These warrants were issued in connection with our August 2008 private placement of 2,825,517 unregistered shares of common stock and 1,412,758 common stock warrants. The warrants had an original exercise price of $8.50 and expire in August 2013. Under the new standard, these warrants previously recognized in stockholders' equity (deficit) are now accounted for as fair value liabilities, with changes in fair value included in net earnings (loss).

Revenue Recognition

Product Sales

See Notes to Consolidated Condensed Financial Statements included elsewhere herein for disclosure and discussion of revenue recognition.

Research and Development

We earn revenue for performing tasks under research and development agreements with both commercial enterprises, such as Olympus and Senko, and governmental agencies like the National Institutes of Health ("NIH"). Revenue earned under development agreements is classified as either research grant or development revenues depending on the nature of the arrangement. Revenues derived from reimbursement of direct out-of-pocket expenses for research costs associated with grants are recorded as research grant and other within development revenues. Research grant revenue is recorded at the gross amount of the reimbursement. The costs associated with these reimbursements are reflected as a component of research and development expense in our statements of operations. Additionally, research and development arrangements we have with commercial enterprises such as Olympus and Senko are considered a key component of our central and ongoing operations. Accordingly, when recognized, the inflows from such arrangements are presented as revenues in our statements of operations.

Goodwill Impairment Testing

In late 2002, we purchased StemSource, Inc. and recognized over $4,600,000 in goodwill associated with the acquisition, of which $3,922,000 remains on our balance sheet as of March 31, 2011. We test this goodwill at least annually, as of November 30, for impairment as well as when an event occurs or circumstances change such that it is reasonably possible that impairment may exist. The application of the goodwill impairment test involves a substantial amount of judgment. The judgments employed may have an effect on whether a goodwill impairment loss is recognized.

No impairment triggering events occurred during the three months ended March 31, 2011 that would require us to perform an impairment test.

Variable Interest Entity (Olympus-Cytori Joint Venture)

A variable interest entity, or VIE, must be consolidated by its primary beneficiary. Evaluating whether an entity is a VIE and determining its primary beneficiary involves significant judgment.

We concluded that the Olympus-Cytori Joint Venture was a VIE based on the following factors:

- An entity is a VIE if it has insufficient equity to finance its activities. We recognized that the initial cash contributed to the Joint Venture formed by Olympus and Cytori ($30,000,000) would be completely utilized by the first quarter of 2006. Moreover, it was highly unlikely that the Joint Venture would be able to obtain the necessary financing from third party lenders without additional subordinated financial support – such as personal guarantees by one or both of the Joint Venture stockholders. Accordingly, the joint venture will require additional financial support from Olympus and Cytori to finance its ongoing operations, indicating that the Joint Venture is a VIE. In fact, we contributed $330,000, $300,000 and $150,000 in 2010, 2009, and 2008, respectively.

- Olympus has a contingent put option that would, in specified circumstances, require Cytori to purchase Olympus's interests in the Joint Venture for a fixed amount of $22,000,000. Accordingly, Olympus is protected in some circumstances from absorbing all expected losses in the Joint Venture, and as such, Olympus may not be an "at-risk" equity holder, although Olympus clearly has decision rights over the operations of the Joint Venture.

Because the Joint Venture is undercapitalized, and because one of the Joint Venture's decision makers may be protected from losses, we have determined that the Joint Venture is a VIE.

As noted previously, a VIE is consolidated by its primary beneficiary. The primary beneficiary is defined as the entity that would absorb the majority of the VIE's expected losses or be entitled to receive the majority of the VIE's residual returns (or both).

Significant judgment was involved in determining the primary beneficiary of the Joint Venture. We believe that Olympus and Cytori are "de facto agents" and, together, will absorb more than 50% of the Joint Venture's expected losses and residual returns. Ultimately, we concluded that Olympus, and not Cytori, was the party most closely related with the joint venture and, hence, its primary beneficiary. Our conclusion was based on the following factors:

- The business operations of the Joint Venture will be most closely aligned to those of Olympus (i.e., the manufacture of devices).

- Olympus controls the Board of Directors, as well as the day-to-day operations of the Joint Venture, and therefore has the primary power to direct activities that could significantly impact economic performance.

Had we consolidated the Joint Venture, though, there would be no effect on our net loss or shareholders' equity at March 31, 2011 or for the period then ended. However, certain balance sheet and income statement captions would have been presented in a different manner. For instance, we would not have presented a single line item entitled investment in joint venture in our balance sheet but, instead, would have performed a line by line consolidation of each of the Joint Venture's accounts into our financial statements.

Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carry forwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income (loss) in the years in which those temporary differences are expected to be recovered or settled. Due to our history of loss, a full valuation allowance is recognized against our deferred tax assets.

Recently Adopted Accounting Pronouncements

See Notes to Consolidated Condensed Financial Statements included elsewhere herein for disclosure and discussion of new accounting standards.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

We are exposed to market risk related to fluctuations in interest rates and in foreign currency exchange rates.

Interest Rate Exposure

We are not subject to market risk due to fluctuations in interest rates on our long-term obligations as they bear a fixed rate of interest. Our exposure relates primarily to short-term investments, including funds classified as cash equivalents. As of March 31, 2011, all excess funds were invested in money market funds and other highly liquid investments, therefore our interest rate exposure is not considered to be material.

Foreign Currency Exchange Rate Exposure

Our exposure to market risk due to fluctuations in foreign currency exchange rates relates primarily to our activities in Europe and Japan. Transaction gains or losses resulting from cash balances and revenues have not been significant in the past and we are not currently engaged in any hedging activity in the Euro, the Yen or other currencies. Based on our cash balances and revenues derived from markets other than the United States for the quarter ended March 31, 2011, a hypothetical 10% adverse change in the Euro or Yen against the U.S. dollar are not expected to result in a material foreign currency exchange loss. Consequently, we do not expect that reductions in the value of such sales denominated in foreign currencies resulting from even a sudden or significant fluctuation in foreign exchange rates would have a direct material impact on our financial position, results of operations or cash flows.

Notwithstanding the foregoing, the indirect effect of fluctuations in interest rates and foreign currency exchange rates could have a material adverse effect on our business, financial condition and results of operations. For example, foreign currency exchange rate fluctuations may affect international demand for our products. In addition, interest rate fluctuations may affect our customers' buying patterns. Furthermore, interest rate and currency exchange rate fluctuations may broadly influence the United States and foreign economies resulting in a material adverse effect on our business, financial condition and results of operations.

Under our Japanese Thin Film agreement with Senko, we would receive payments in the nature of royalties based on Senko's net sales, which would be Yen denominated.

Item 4. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports filed or furnished pursuant to the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow for timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management necessarily is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

As required by Rule 13a-15(b) under the Exchange Act, we carried out an evaluation, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, of the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this Quarterly Report of Form 10-Q. Based on the foregoing, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective and were operating at a reasonable assurance level as of March 31, 2011.

Changes in Internal Control over Financial Reporting

There has been no change in our internal control over financial reporting during the quarter ended March 31, 2011 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

From time to time, we have been involved in routine litigation incidental to the conduct of our business. As of March 31, 2011, we were not a party to any material legal proceeding.

Item 1A. Risk Factors

In analyzing our company, you should consider carefully the following risk factors together with all of the other information included in this quarterly report on Form 10-Q. Factors that could adversely affect our business, operating results, and financial condition, as well as adversely affect the value of an investment in our common stock, include those discussed below, as well as those discussed above in "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere throughout this quarterly report on Form 10-Q.

We are subject to the following significant risks, among others:

We may need to raise more cash in the future

We have almost always had negative cash flows from operations. Our business will continue to result in a substantial requirement for research and development expenses for several years, during which we may not be able to bring in sufficient cash and/or revenues to offset these expenses. We will likely be required to raise capital from one or more sources in the future to continue funding our operations to profitability. We do not currently believe that our cash balance and the revenues from our operations will be sufficient to fund the development and marketing efforts required to reach profitability without raising additional capital from accessible sources of financing in the future. In addition, our Amended and Restated Loan and Security Agreement with General Electric Capital Corporation, Silicon Valley Bank and Oxford Finance Corporation requires us to maintain certain minimum cash requirements, and if our cash reserves fall below those minimum requirements, then we could be in default under our loan agreement and subject to potential adverse remedies by the lenders, which would have a substantial and material adverse effect on our business, financial condition, results of operations, the value of our common stock and warrants and our ability to raise capital. There is no guarantee that adequate funds will be available when needed from additional debt or equity financing, arrangements with development and commercialization partners, increased results of operations, or from other sources, or on terms attractive to us. Our inability to obtain sufficient additional funds in the future would, at a minimum, require us to delay, scale back, or eliminate some or all of our research or product development, manufacturing operations, clinical or regulatory activities, which could have a substantial negative effect on our results of operations and financial condition.

Continued turmoil in the economy could harm our business

Negative trends in the general economy, including trends resulting from an actual or perceived recession, tightening credit markets, increased cost of commodities, including oil, actual or threatened military action by the United States and threats of terrorist attacks in the United States and abroad, could cause a reduction of investment in and available funding for companies in certain industries, including ours. Our ability to raise capital has been and may in the future be adversely affected by downturns in current credit conditions, financial markets and the global economy.

We have never been profitable on an operational basis and expect significant operating losses for the next few years

We have incurred net operating losses in each year since we started business. As our focus on the Celution® System platform and development of therapeutic applications for its cellular output has increased, losses have resulted primarily from expenses associated with research and development activities and general and administrative expenses. While we work continuously to implement cost reduction measures where possible, we nonetheless expect to continue operating in a loss position on a consolidated basis and that recurring operating expenses will be at high levels for the next several years, in order to perform clinical trials, additional pre-clinical research, product development, and marketing. As a result of our historic losses, we have been, and are likely to continue to be, reliant on raising outside capital to fund our operations as discussed in the prior risk factor.

Our business strategy is high-risk

We are focusing our resources and efforts primarily on development of the Celution® System family of products and the therapeutic applications of its cellular output, which requires extensive cash needs for research, development, and commercialization activities. This is a high-risk strategy because there is no assurance that our products will ever become commercially viable (commercial risk), that we will prevent other companies from depriving us of market share and profit margins by selling products based on our inventions and developments (legal risk), that we will successfully manage a company in a new area of business (regenerative medicine) and on a different scale than we have operated in the past (operational risk), that we will be able to achieve the desired therapeutic results using stem and regenerative cells (scientific risk), or that our cash resources will be adequate to develop our products until we become profitable, if ever (financial risk). We are using our cash in one of the riskiest industries in the economy (strategic risk). This may make our stock an unsuitable investment for many investors.

We must keep our joint venture with Olympus operating smoothly

Our business depends in part on keeping our Joint Venture collaboration with Olympus operating smoothly and efficiently. We have given Olympus-Cytori, Inc. an exclusive license to manufacture future generation Celution® System devices. If Olympus-Cytori, Inc. does not successfully develop and manufacture these devices, we may not be able to commercialize these devices successfully into the market. In addition, future disruption or breakup of our relationship would be extremely costly to our reputation, in addition to causing many serious practical problems.

We and Olympus must overcome contractual and cultural barriers. Although our relationship is formally measured by a set of complex contracts, many aspects of the relationship will be non-contractual and must be worked out between the parties and the responsible individuals. The Joint Venture is intended to have a long life, and it is difficult to maintain cooperative relationships over a long period of time in the face of various kinds of change. Cultural differences, including language barrier to some degree, may affect the efficiency of the relationship.

Olympus-Cytori, Inc. is 50% owned by us and 50% owned by Olympus. By contract, each side must consent before any of a wide variety of important business actions can occur. This situation possesses a risk of potentially time-consuming and difficult negotiations which could at some point delay the Joint Venture from pursuing its business strategies.

Olympus is entitled to designate the Joint Venture's chief executive officer and a majority of its board of directors, which means that day-to-day decisions which are not subject to a contractual veto will essentially be controlled by Olympus. In addition, Olympus-Cytori, Inc. may require more money than its current capitalization in order to complete development and production of future generation devices. If we are unable to help provide future financing for Olympus-Cytori, Inc., our relative equity interest in Olympus-Cytori, Inc. may decrease.

Furthermore, under a License/Joint Development Agreement among Olympus-Cytori, Inc., Olympus, and us, Olympus will have a primary role in the development of Olympus-Cytori, Inc.’s next generation devices. Although Olympus has extensive experience in developing medical devices, this arrangement will result in a reduction of our control over the development and manufacturing of the next generation devices.

We have a limited operating history; operating results and stock price can be volatile like many life science companies

Our prospects must be evaluated in light of the risks and difficulties frequently encountered by emerging companies and particularly by such companies in rapidly evolving and technologically advanced biotech and medical device fields. From time to time, we have tried to update our investors’ expectations as to our operating results by periodically announcing financial guidance. However, we have in the past been forced to revise or withdraw such guidance due to lack of visibility and predictability of product demand.

We are vulnerable to competition and technological change, and also to physicians’ inertia

We compete with many domestic and foreign companies in developing our technology and products, including biotechnology, medical device, and pharmaceutical companies. Many current and potential competitors have substantially greater financial, technological, research and development, marketing, and personnel resources. There is no assurance that our competitors will not succeed in developing alternative products that are more effective, easier to use, or more economical than those which we have developed or are in the process of developing, or that would render our products obsolete and non-competitive. In general, we may not be able to prevent others from developing and marketing competitive products similar to ours or which perform similar functions.

Competitors may have greater experience in developing therapies or devices, conducting clinical trials, obtaining regulatory clearances or approvals, manufacturing and commercialization. It is possible that competitors may obtain patent protection, approval, or clearance from the FDA or achieve commercialization earlier than we can, any of which could have a substantial negative effect on our business. Finally, Olympus and our other partners might pursue parallel development of other technologies or products, which may result in a partner developing additional products competitive with ours.

We compete against cell-based therapies derived from alternate sources, such as bone marrow, umbilical cord blood and potentially embryos. Doctors historically are slow to adopt new technologies like ours, whatever the merits, when older technologies continue to be supported by established providers. Overcoming such inertia often requires very significant marketing expenditures or definitive product performance and/or pricing superiority.

We expect physicians' inertia and skepticism to also be a significant barrier as we attempt to gain market penetration with our future products. We believe we will need to finance lengthy time-consuming clinical studies (so as to provide convincing evidence of the medical benefit) in order to overcome this inertia and skepticism particularly in reconstructive surgery, cell preservation, the cardiovascular area and many other indications.

Most potential applications of our technology are pre-commercialization, which subjects us to development and marketing risks

We are in a relatively early stage of the path to commercialization with many of our products. We believe that our long-term viability and growth will depend in large part on our ability to develop commercial quality cell processing devices and useful procedure-specific consumables, and to establish the safety and efficacy of our therapies through clinical trials and studies. With our Celution® System platform, we are pursuing new approaches for reconstructive surgery, preservation of stem and regenerative cells for potential future use, therapies for cardiovascular disease, gastrointestinal disorders and spine and orthopedic conditions. There is no assurance that our development programs will be successfully completed or that required regulatory clearances or approvals will be obtained on a timely basis, if at all.

There is no proven path for commercializing the Celution® System platform in a way to earn a durable profit commensurate with the medical benefit. Although we began to commercialize our reconstructive surgery products in Europe and certain Asian markets, and our cell banking products in Japan, Europe, and certain Asian markets in 2008, additional market opportunities for many of our products and/or services are likely to be another two to four years away.

Successful development and market acceptance of our products is subject to developmental risks, including failure of inventive imagination, ineffectiveness, lack of safety, unreliability, failure to receive necessary regulatory clearances or approvals, high commercial cost, preclusion or obsolescence resulting from third parties' proprietary rights or superior or equivalent products, competition from copycat products, and general economic conditions affecting purchasing patterns. There is no assurance that we or our partners will successfully develop and commercialize our products, or that our competitors will not develop competing technologies that are less expensive or superior. Failure to successfully develop and market our products would have a substantial negative effect on our results of operations and financial condition.

Future clinical trial results may differ significantly from our expectations

While our early clinical trial results so far have been very positive, and we have proceeded incrementally in the our these clinical trials in an effort to gauge the risks of proceeding with larger and more expensive trials, we cannot guarantee that we will not experience negative results in these larger and much more expensive clinical trials, such as the new ADVANCE acute heart attack trial in Europe. Poor results in our clinical trials could result in substantial delays in commercialization, substantial negative effects on the perception of our products, and substantial additional costs. These risks are increased by our reliance on third parties in the performance of many of the clinical trial functions, including the clinical investigators, hospitals, and other third party service providers.

The timing and amount of Thin Film revenues from Senko are uncertain

The sole remaining product line in our MacroPore Biosurgery segment is our Japan Thin Film business. Our right to receive royalties from Senko, and to recognize certain deferred revenues, depends on the timing of MHLW approval for commercialization of the product in Japan. We have no control over this timing and our previous expectations have not been met. Also, even after commercialization, we will be dependent on Senko, our exclusive distributor, to drive product sales in Japan.

We have limited manufacturing experience

We have limited experience in manufacturing the Celution® System platform or its consumables at a commercial level. With respect to our Joint Venture, although Olympus is a highly capable and experienced manufacturer of medical devices, there can be no guarantee that the Olympus-Cytori Joint Venture will be able to successfully develop and manufacture the next generation Celution® System in a manner that is cost-effective or commercially viable, or that development and manufacturing capabilities might not take much longer than currently anticipated to be ready for the market.

Although we have begun introduction of the Celution® 800 and the StemSource® 900-based Cell Bank in 2008, we cannot assure that we will be able to manufacture sufficient numbers of such products to meet the demand, or that we will be able to overcome unforeseen manufacturing difficulties for these sophisticated medical devices, as we await the availability of the Joint Venture next generation Celution® System.

In the event that the Olympus-Cytori Joint Venture is not successful, Cytori may not have the resources or ability to self-manufacture sufficient numbers of devices and consumables to meet market demand, and this failure may substantially extend the time it would take for us to bring a more advanced commercial device to market. This makes us significantly dependant on the continued dedication and skill of Olympus for the successful development of the next generation Celution® System.

We may not be able to protect our proprietary rights

Our success depends in part on whether we can maintain our existing patents, obtain additional patents, maintain trade secret protection, and operate without infringing on the proprietary rights of third parties.

There can be no assurance that any of our pending patent applications will be approved or that we will develop additional proprietary products that are patentable. There is also no assurance that any patents issued to us will not become the subject of a re-examination, will provide us with competitive advantages, will not be challenged by any third parties, or that the patents of others will not prevent the commercialization of products incorporating our technology. Furthermore, there can be no guarantee that others will not independently develop similar products, duplicate any of our products, or design around our patents.

Our commercial success will also depend, in part, on our ability to avoid infringing on patents issued to others. If we were judicially determined to be infringing on any third-party patent, we could be required to pay damages, alter our products or processes, obtain licenses, or cease certain activities. If we are required in the future to obtain any licenses from third parties for some of our products, there can be no guarantee that we would be able to do so on commercially favorable terms, if at all. U.S. patent applications are not immediately made public, so we might be surprised by the grant to someone else of a patent on a technology we are actively using. As noted above and in the case of the University of Pittsburgh lawsuit, even patents issued to us or our licensors might be judicially determined to belong in full or in part to third parties.

Litigation, which would result in substantial costs to us and diversion of effort on our part, may be necessary to enforce or confirm the ownership of any patents issued or licensed to us, or to determine the scope and validity of third-party proprietary rights. If our competitors claim technology also claimed by us and prepare and file patent applications in the United States, we may have to participate in interference proceedings declared by the U.S. Patent and Trademark Office or a foreign patent office to determine priority of invention, which could result in substantial costs to and diversion of effort, even if the eventual outcome is favorable to us. Any such litigation or interference proceeding, regardless of outcome, could be expensive and time-consuming.

Successful challenges to our patents through oppositions, reexamination proceedings or interference proceedings could result in a loss of patent rights in the relevant jurisdiction. If we are unsuccessful in actions we bring against the patents of other parties and it is determined that we infringe the patents of third-parties, we may be subject to litigation, or otherwise prevented from commercializing potential products in the relevant jurisdiction, or may be required to obtain licenses to those patents or develop or obtain alternative technologies, any of which could harm our business. Furthermore, if such challenges to our patent rights are not resolved in our favor, we could be delayed or prevented from entering into new collaborations or from commercializing certain products, which could adversely affect our business and results of operations.

Competitors or third parties may infringe our patents. We may be required to file patent infringement claims, which can be expensive and time-consuming. In addition, in an infringement proceeding, a court may decide that a patent of ours is not valid or is unenforceable, or that the third party's technology does not in fact infringe upon our patents. An adverse determination of any litigation or defense proceedings could put one or more of our patents at risk of being invalidated or interpreted narrowly and could put our related pending patent applications at risk of not issuing. Litigation may fail and, even if successful, may result in substantial costs and be a distraction to our management. We may not be able to prevent misappropriation of our proprietary rights, particularly in countries outside the U.S. where patent rights may be more difficult to enforce. Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential or sensitive information could be compromised by disclosure in the event of litigation. In addition, during the course of litigation there could be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock.

In addition to patents, which alone may not be able to protect the fundamentals of our regenerative cell business, we also rely on unpatented trade secrets and proprietary technological expertise. Some of our intended future cell-related therapeutic products may fit into this category. We rely, in part, on confidentiality agreements with our partners, employees, advisors, vendors, and consultants to protect our trade secrets and proprietary technological expertise. There can be no guarantee that these agreements will not be breached, or that we will have adequate remedies for any breach, or that our unpatented trade secrets and proprietary technological expertise will not otherwise become known or be independently discovered by competitors.

Our amended regenerative cell technology license agreement with the Regents of the University of California (UC) which includes issued U.S. patent number 7,470,537, contains certain developmental milestones, which if not achieved could result in the loss of exclusivity or loss of the license rights. The loss of such rights could impact our ability to develop certain regenerative cell technology products. Also, our power as licensee to successfully use these rights to exclude competitors from the market is untested.

Failure to obtain or maintain patent protection, or protect trade secrets, for any reason (or third-party claims against our patents, trade secrets, or proprietary rights, or our involvement in disputes over our patents, trade secrets, or proprietary rights, including involvement in litigation), could have a substantial negative effect on our results of operations and financial condition.

We may not be able to protect our intellectual property in countries outside the United States

Intellectual property law outside the United States is uncertain and in many countries is currently undergoing review and revisions. The laws of some countries do not protect our patent and other intellectual property rights to the same extent as United States laws. This is particularly relevant to us as most of our current commercial product sales and clinical trials are outside of the United States. Third parties may attempt to oppose the issuance of patents to us in foreign countries by initiating opposition proceedings. Opposition proceedings against any of our patent filings in a foreign country could have an adverse effect on our corresponding patents that are issued or pending in the United States. It may be necessary or useful for us to participate in proceedings to determine the validity of our patents or our competitors' patents that have been issued in countries other than the U.S. This could result in substantial costs, divert our efforts and attention from other aspects of our business, and could have a material adverse effect on our results of operations and financial condition. We currently have pending patent applications in Europe, Australia, Japan, Canada, China, Korea, and Singapore, among others.

We and Olympus-Cytori, Inc. are subject to FDA regulation

As newly developed medical devices, the Celution® System family of products must receive regulatory clearances or approvals from the FDA and, in many instances, from non-U.S. and state governments prior to their sale. The Celution® System family of products is subject to stringent government regulation in the United States by the FDA under the Federal Food, Drug and Cosmetic Act. The FDA regulates the design/development process, clinical testing, manufacture, safety, labeling, sale, distribution, and promotion of medical devices and drugs. Included among these regulations are pre-market clearance and pre-market approval requirements, design control requirements, and the Quality System Regulations/Good Manufacturing Practices. Other statutory and regulatory requirements govern, among other things, establishment registration and inspection, medical device listing, prohibitions against misbranding and adulteration, labeling and post-market reporting.

The regulatory process can be lengthy, expensive, and uncertain. Before any new medical device may be introduced to the U.S. market, the manufacturer generally must obtain FDA clearance or approval through either the 510(k) pre-market notification process or the lengthier pre-market approval application, or PMA, process. It generally takes from three to 12 months from submission to obtain 510(k) pre-market clearance, although it may take longer. Approval of a PMA could take four or more years from the time the process is initiated. The 510(k) and PMA processes can be expensive, uncertain, and lengthy, and there is no guarantee of ultimate clearance or approval. We expect that some of our future products under development as well as Olympus-Cytori's will be subject to the lengthier PMA process. Securing FDA clearances and approvals may require the submission of extensive clinical data and supporting information to the FDA, and there can be no guarantee of ultimate clearance or approval. Failure to comply with applicable requirements can result in application integrity proceedings, fines, recalls or seizures of products, injunctions, civil penalties, total or partial suspensions of production, withdrawals of existing product approvals or clearances, refusals to approve or clear new applications or notifications, and criminal prosecution.

Medical devices are also subject to post-market reporting requirements for deaths or serious injuries when the device may have caused or contributed to the death or serious injury, and for certain device malfunctions that would be likely to cause or contribute to a death or serious injury if the malfunction were to recur. If safety or effectiveness problems occur after the product reaches the market, the FDA may take steps to prevent or limit further marketing of the product. Additionally, the FDA actively enforces regulations prohibiting marketing and promotion of devices for indications or uses that have not been cleared or approved by the FDA.

There can be no guarantee that we will be able to obtain the necessary 510(k) clearances or PMA approvals to market and manufacture our other products in the United States for their intended use on a timely basis, if at all. Delays in receipt of or failure to receive such clearances or approvals, the loss of previously received clearances or approvals, or failure to comply with existing or future regulatory requirements could have a substantial negative effect on our results of operations and financial condition.

To sell in international markets, we will be subject to regulation in foreign countries

In cooperation with our distribution partners, we intend to market our current and future products both domestically and in many foreign markets. A number of risks are inherent in international transactions. In order for us to market our products in Europe, Canada, Japan and certain other non-U.S. jurisdictions, we need to obtain and maintain required regulatory approvals or clearances and must comply with extensive regulations regarding safety, manufacturing processes and quality. For example, we still have not obtained regulatory approval for our Thin Film products in Japan. These regulations, including the requirements for approvals or clearances to market, may differ from the FDA regulatory scheme. International sales also may be limited or disrupted by political instability, price controls, trade restrictions and changes in tariffs. Additionally, fluctuations in currency exchange rates may adversely affect demand for our products by increasing the price of our products in the currency of the countries in which the products are sold.

There can be no assurance that we will obtain regulatory approvals or clearances in all of the countries where we intend to market our products, or that we will not incur significant costs in obtaining or maintaining foreign regulatory approvals or clearances, or that we will be able to successfully commercialize current or future products in various foreign markets. Delays in receipt of approvals or clearances to market our products in foreign countries, failure to receive such approvals or clearances or the future loss of previously received approvals or clearances could have a substantial negative effect on our results of operations and financial condition.

Changing, New and/or Emerging Government Regulations

Government regulations can change without notice. Given the fact that Cytori operates in various international markets, our access to such markets could change with little to no warning due to a change in government regulations that suddenly up-regulate our product(s) and create greater regulatory burden for our cell therapy and cell banking technology products.

Due to the fact that there are new and emerging cell therapy and cell banking regulations that have recently been drafted and/or implemented in various countries around the world, the application and subsequent implementation of these new and emerging regulations have little to no precedence. Therefore, the level of complexity and stringency is not known and may vary from country to country, creating greater uncertainty for the international regulatory process.

Anticipated or unanticipated changes in the way or manner in which the FDA regulates products or classes/groups of products can delay, further burden, or alleviate regulatory pathways that were once available to other products. There are no guarantees that such changes in FDA's approach to the regulatory process will not deleteriously affect some or all of our products or product applications.

We do not know if the current FDA proposed changes to the 510(k) system will have any material effect on any of our current or future 510(k) applications.

Health Insurance Reimbursement Risks

New and emerging cell therapy and cell banking technologies, such as those provided by the Celution® System family of products, may have difficulty or encounter significant delays in obtaining health care reimbursement in some or all countries around the world due to the novelty of our cell therapy and cell banking technology and subsequent lack of existing reimbursement schemes / pathways. Therefore, the creation of new reimbursement pathways may be complex and lengthy with no assurances that such reimbursements will be successful. The lack of health insurance reimbursement or reduced or minimal reimbursement pricing may have a significant impact on our ability to successfully sell our cell therapy and cell banking technology product(s) into a county or region.

Concentration of Sales/ Effects of Japan Crisis

We have a significant concentration of sales in Japan, the United States, and Europe given our early stage of commercialization. As a result of this regional concentration of sales, changes in the regulatory environment in these countries, or any other countries in which we have a significant concentration of sales, could adversely impact our sales. If the government of any of these countries significantly curtailed or prohibited the sale of our products, our revenues would be adversely affected. Recently, the earthquake, tsunami and subsequent problems affecting nuclear power plants in Japan have dramatically impacted Japan's manufacturing capacity and business activities. The long term effect of these issues is still uncertain. While we expect that the situation will stabilize and improve, if it does not, these circumstances could have a materially negative affect our revenues and profitability since our new Celution® One device is manufactured in Japan, and a substantial portion of our sales have come from Japan.

Global Operations Expose Us To Additional Risk And Uncertainties.

We have operations in a number of regions around the world, including the United States, Japan, and Europe. Our global operations may be subject to risks that may limit our ability to operate our business. We sell our products globally, which exposes us to a number of risks that can arise from international trade transactions, local business practices and cultural considerations, including:

- political unrest, terrorism and economic or financial instability;
- unexpected changes and uncertainty in regulatory requirements and systems related

- nationalization programs that may be implemented by foreign governments;
- import-export regulations;
- difficulties in enforcing agreements and collecting receivables;
- difficulties in ensuring compliance with the laws and regulations of multiple jurisdictions;
- changes in labor practices, including wage inflation, labor unrest and unionization policies;
- longer payment cycles by international customers;
- currency exchange fluctuations;
- disruptions of service from utilities or telecommunications providers, including electricity shortages;
- difficulties in staffing foreign branches and subsidiaries and in managing an expatriate workforce, and differing employment practices and labor issues;
- potentially adverse tax consequences;

We also face risks associated with currency exchange and convertibility, inflation and repatriation of earnings as a result of our foreign operations. We are also vulnerable to appreciation or depreciation of foreign currencies against the U.S. dollar. Although we have significant operations in Asia, a substantial portion of transactions are denominated in U.S. dollars. As appreciation against the U.S. dollar increases, it will result in an increase in the cost of our business expenses in abroad. Further, downward fluctuations in the value of foreign currencies relative to the U.S. dollar may make our products less price competitive than local solutions. From time to time, we may engage in currency hedging activities, but such activities may not be able to limit the risks of currency fluctuations.

Market Acceptance of New Technology

New and emerging cell therapy and cell banking technologies, such as those provided by the Celution® System family of products, may have difficulty or encounter significant delays in obtaining market acceptance in some or all countries around the world due to the novelty of our cell therapy and cell banking technologies. Therefore, the market adoption of our cell therapy and cell banking technologies may be slow and lengthy with no assurances that significant market adoption will be successful. The lack of market adoption or reduced or minimal market adoption of our cell therapy and cell banking technologies may have a significant impact on our ability to successfully sell our product(s) into a country or region.

We and/or the Joint Venture have to maintain quality assurance certification and manufacturing approvals

The manufacture of our Celution® System will be, and the manufacture of any future cell-related therapeutic products would be, subject to periodic inspection by regulatory authorities and distribution partners. The manufacture of devices and products for human use is subject to regulation and inspection from time to time by the FDA for compliance with the FDA's Quality System Regulation, or QSR, requirements, as well as equivalent requirements and inspections by state and non-U.S. regulatory authorities. There can be no guarantee that the FDA or other authorities will not, during the course of an inspection of existing or new facilities, identify what they consider to be deficiencies in our compliance with QSRs or other requirements and request, or seek remedial action.

Failure to comply with such regulations or a potential delay in attaining compliance may adversely affect our manufacturing activities and could result in, among other things, injunctions, civil penalties, FDA refusal to grant pre-market approvals or clearances of future or pending product submissions, fines, recalls or seizures of products, total or partial suspensions of production, and criminal prosecution. There can be no assurance after such occurrences that we will be able to obtain additional necessary regulatory approvals or clearances on a timely basis, if at all. Delays in receipt of or failure to receive such approvals or clearances, or the loss of previously received approvals or clearances could have a substantial negative effect on our results of operations and financial condition.

We depend on a few key officers

Our performance is substantially dependent on the performance of our executive officers and other key scientific and sales staff, including Christopher J. Calhoun, our Chief Executive Officer, and Marc Hedrick, MD, our President. We rely upon them for strategic business decisions and guidance. We believe that our future success in developing marketable products and achieving a competitive position will depend in large part upon whether we can attract and retain additional qualified management and scientific personnel. Competition for such personnel is intense, and there can be no assurance that we will be able to continue to attract and retain such personnel. The loss of the services of one or more of our executive officers or key scientific staff or the inability to attract and retain additional personnel and develop expertise as needed could have a substantial negative effect on our results of operations and financial condition.

We may not have enough product liability insurance

The testing, manufacturing, marketing, and sale of our regenerative cell products involve an inherent risk that product liability claims will be asserted against us, our distribution partners, or licensees. There can be no guarantee that our clinical trial and commercial product liability insurance is adequate or will continue to be available in sufficient amounts or at an acceptable cost, if at all. A product liability claim, product recall, or other claim, as well as any claims for uninsured liabilities or in excess of insured liabilities, could have a substantial negative effect on our results of operations and financial condition. Also, well-publicized claims could cause our stock to fall sharply, even before the merits of the claims are decided by a court.

Our charter documents contain anti-takeover provisions and we have adopted a Stockholder Rights Plan to prevent hostile takeovers

Our Amended and Restated Certificate of Incorporation and Bylaws contain certain provisions that could prevent or delay the acquisition of Cytori by means of a tender offer, proxy contest, or otherwise. They could discourage a third party from attempting to acquire control of Cytori, even if such events would be beneficial to the interests of our stockholders. Such provisions may have the effect of delaying, deferring, or preventing a change of control of Cytori and consequently could adversely affect the market price of our shares. Also, in 2003 we adopted a Stockholder Rights Plan of the kind often referred to as a poison pill. The purpose of the Stockholder Rights Plan is to prevent coercive takeover tactics that may otherwise be utilized in takeover attempts. The existence of such a rights plan may also prevent or delay a change in control of Cytori, and this prevention or delay adversely affect the market price of our shares.

We pay no dividends

We have never paid cash dividends in the past, and currently do not intend to pay any cash dividends in the foreseeable future.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

None

Item 3. Defaults Upon Senior Securities

None

Item 4. (Reserved)

Item 5. Other Information

Properties

We currently lease 60,118 square feet at 3020 and 3030 Callan Road, San Diego, California. The related lease agreement bears monthly rent at a rate of $1.75 per square foot, with annual increase of $0.05 per square foot. The lease term is 64 months, commencing on July 1, 2010 and expiring on October 31, 2015. In connection with this lease, we received a four month rent abatement period and an allowance for leasehold improvements of approximately $300,000. Additionally, we've entered into several lease agreements for international office locations and corporate housing for our employees on international assignments. For these properties, we pay an aggregate of approximately $148,000 in rent per month.

Staff

As of March 31, 2011, we had 128 employees, including part-time and full-time employees. These employees are comprised of 19 employees in manufacturing, 38 employees in research and development, 40 employees in sales and marketing and 31 employees in management and finance and administration. From time to time, we also employ independent contractors to support our operations. Our employees are not represented by any collective bargaining unit and we have never experienced an organized work stoppage.

Item 6. Exhibits

Exhibit No.	Description
10.77	Form Notice and Restricted Stock Award Agreement for grants of performance-based restricted stock awards under the 2004 Equity Incentive Plan (filed as Exhibit 10.1 to our current report on Form 8-K filed on March 4, 2011 and incorporated by reference herein)
1.1	Underwriting Agreement, dated October 8, 2010, between Cytori Therapeutics, Inc. and Jefferies & Company (filed as Exhibit 1.1 to our Form 8-K Current Report as filed on October 8, 2010 and incorporated by reference herein).
31.1	Certification of Principal Executive Officer Pursuant to Securities Exchange Act Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).
31.2	Certification of Principal Financial Officer Pursuant to Securities Exchange Act Rule 13a-14(a), as adopted pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith).
32.1*	Certifications Pursuant to 18 U.S.C. Section 1350/ Securities Exchange Act Rule 13a-14(b), as adopted pursuant to Section 906 of the Sarbanes - Oxley Act of 2002 (filed herewith).

* These certifications are being furnished solely to accompany this report pursuant to 18 U.S.C. 1350 and are not being filed for purposes of Section 18 of the Securities and Exchange Act of 1934 and are not to be incorporated by reference into any filing of the Company, whether made before or after the date hereof, regardless of any general incorporation language 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 thereunto duly authorized.

CYTORI THERAPEUTICS, INC.

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

Dated: May 6, 2011

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

Dated: May 6, 2011

EXHIBIT 31.1

Certification of Principal Executive Officer Pursuant to
Securities Exchange Act Rule 13a-14(a),
as Adopted Pursuant to
Section 302 of the Sarbanes-Oxley Act of 2002

I, Christopher J. Calhoun, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Cytori Therapeutics, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements and other financial information included in this report fairly present in all material respects the financial condition, results of operations, and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report- based on such evaluation; and

   (d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize, and report financial information; and

   (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 6, 2011
/s/ Christopher J. Calhoun
Christopher J. Calhoun,
Chief Executive Officer

EXHIBIT 31.2

Certification of Principal Financial Officer Pursuant to
Securities Exchange Act Rule 13a-14(a),
as Adopted Pursuant to
Section 302 of the Sarbanes-Oxley Act of 2002

I, Mark E. Saad, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Cytori Therapeutics, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements and other financial information included in this report fairly present in all material respects the financial condition, results of operations, and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report- based on such evaluation; and

   (d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize, and report financial information; and

   (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 6, 2011
/s/ Mark E. Saad
Mark E. Saad
Chief Financial Officer

EXHIBIT 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350/ SECURITIES EXCHANGE ACT RULE 13a-14(b), AS ADOPTED PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Cytori Therapeutics, Inc. for the quarterly period ended March 31, 2011 as filed with the Securities and Exchange Commission on the date hereof, Christopher J. Calhoun, as Chief Executive Officer of Cytori Therapeutics, Inc., and Mark E. Saad, as Chief Financial Officer of Cytori Therapeutics, Inc., each hereby certifies, respectively, that:

1. The Form 10-Q report of Cytori Therapeutics, Inc. that this certification accompanies fully complies with the requirements of Section 13(a) of the Securities Exchange Act of 1934.

2. The information contained in the Form 10-Q report of Cytori Therapeutics, Inc. that this certification accompanies fairly presents, in all material respects, the financial condition and results of operations of Cytori Therapeutics, Inc.

By: /s/ Christopher J. Calhoun

Dated: May 6, 2011

Christopher J. Calhoun
Chief Executive Officer

By: /s/ Mark E. Saad

Dated: May 6, 2011

Mark E. Saad
Chief Financial Officer