CELL THERAPEUTICS INC
Form S-3/A
March 16, 2009
Table of Contents

As filed with the Securities and Exchange Commission on March 16, 2009

Registration No. 333-157376

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Amendment No. 1 to

FORM S-3

REGISTRATION STATEMENT

UNDER

THE SECURITIES ACT OF 1933

CELL THERAPEUTICS, INC.

(Exact name of registrant as specified in its charter)

Washington	**2834**	**91-1533912**
(State of other jurisdiction of	**(Primary Standard Industrial**	**(I.R.S. Employer**

incorporation or organization) **Classification Code Number)** **Identification No.)**

501 Elliott Avenue West, Suite 400

Seattle, Washington 98119

(206) 282-7100

(Address, including zip code, and telephone number, including area code, of registrant s principal executive offices)

James A. Bianco, M.D.

Chief Executive Officer

Cell Therapeutics, Inc.

501 Elliott Avenue West, Suite 400

Seattle, Washington 98119

(206) 282-7100

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copy to:

Karen A. Dempsey, Esq.

Orrick, Herrington & Sutcliffe LLP

405 Howard Street

San Francisco, California 94105

(415) 773-5700

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this registration statement as determined by the selling securityholders.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act, check the following box. x

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ¨

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ¨

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ¨

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 accelerated filer, large accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act.

Large accelerated filer ¨	Accelerated filer x
Non-accelerated filer ¨ (Do not check if a smaller reporting company)	Smaller reporting company ¨

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities To Be Registered	Amount to be Registered	Proposed Maximum Offering Price Per Unit	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee
Warrants to purchase Common Stock, no par value, and shares issuable upon exercise of Warrants	876,457(1)	(1)	$43,508,839(1)	$1,709.90
Common Stock, no par value, issuable upon conversion of Series D 7% convertible preferred stock	38,277(2)	$0.08(3)	$3,062(3)	$0.12
Total	914,734		$43,511,901	$1,710.02(4)

(1) There are being registered hereunder (a) warrants for the purchase of (i) 149,476 shares of common stock issued in connection with the issuance of our Series A 3% convertible preferred stock at an exercise price of $64.40 per share; and (ii) 276,373 shares of common stock issuable upon exercise of warrants issued in connection with the issuance of our Series B 3% convertible preferred stock at an exercise price of $64.80 per share; (b) 259,614 shares of common stock issuable upon exercise of warrants issued in connection with the issuance of our Series C 3% convertible preferred stock at an exercise price of $45.30 per share; (c) 66,985 shares of common stock issuable upon exercise of warrants issued in connection with the issuance of our Series D 7% convertible preferred stock at an exercise price of $25.50 per share; (d) 124,009 shares of common stock issuable upon exercise of warrants issued on December 21, 2007 at an exercise price of $20.20 per share; (e) shares of common stock described in (a) above; and (f) such additional number of shares of common stock, of a currently indeterminable amount, as may from time to time become issuable by reason of stock splits, stock dividends or similar transactions, which shares of common stock are registered hereunder pursuant to Rule 416(a).

(2) The shares of common stock that are being registered are 38,277 shares of common stock issuable upon conversion of the Series D 7% convertible preferred stock at a conversion price of $26.13 per share.

(3) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) under the Securities Act, based upon the average of the high and low sales prices of the registrant s common stock, as reported on the NASDAQ Capital Market on February 9, 2009.

(4) Previously paid.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

Table of Contents

The information in this prospectus is not complete and may be changed. The selling securityholders may not sell these securities until the registration statement filed with the Securities and Exchange Commission becomes effective. This prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any state or jurisdiction where the offer or sale is not permitted.

PROSPECTUS

Subject to completion, dated March 16, 2009

Making cancer more treatable

38,277 Shares of Common Stock Issuable Upon Conversion of Series D 7% Convertible Preferred Stock

Warrants and 876,457 Shares of Common Stock Issuable Upon Exercise of Warrants

We have prepared this prospectus to allow certain selling securityholders identified in this prospectus to offer for resale from time to time:

- warrants issued to certain holders of our Series A 3% convertible preferred stock and up to 149,476 shares of our common stock issuable upon exercise of those warrants;
- warrants issued to certain holders of our Series B 3% convertible preferred stock and up to 276,373 shares of our common stock issuable upon exercise of those warrants;
- up to 259,614 shares of our common stock issuable upon exercise of warrants we issued to certain holders of our Series C 3% convertible preferred stock;
- up to 38,277 shares of our common stock issuable upon conversion of our Series D 7% convertible preferred stock, and up to 66,985 shares of our common stock issuable upon exercise of warrants we issued to certain holders of our Series D 7% convertible preferred stock; and
- up to 124,009 shares of our common stock issuable upon exercise of warrants we issued in connection with an offering of common stock on December 21, 2007.

The selling securityholders may offer and sell their common shares and warrants described above in public or private transactions, or both. These sales may occur at fixed prices, at market prices prevailing at the time of sale, at prices related to prevailing market price, or at negotiated prices.

The selling securityholders may sell securities through underwriters, broker-dealers or agents, who may receive compensation in the form of discounts, concessions or commissions from the selling securityholders, the purchasers of the securities, or both. See Plan of Distribution for a more complete description of the ways in which the securities may be sold. We will not receive any of the proceeds from the sale of the securities by the selling securityholders.

Our common stock is quoted on The NASDAQ Capital Market and on the MTA in Italy under the symbol CTIC . On March 13, 2009, the last reported sale price of our common stock on The NASDAQ Capital Market was $0.08.

Investing in our securities involves a high degree of risk. See Risk Factors beginning on page 8 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is , 2009

Table of Contents

TABLE OF CONTENTS

Table of Contents

No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus or any prospectus supplement. You must not rely on any unauthorized information or representations. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus or any applicable prospectus supplement is current only as of its date, and the information contained in any document incorporated by reference in this prospectus is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus or any prospectus supplement or any sale of a security.

ABOUT THIS PROSPECTUS

This prospectus incorporates important business and financial information about us that is not included in or delivered with this document. This information is available without charge upon written or oral request. See Documents Incorporated by Reference and Where You Can Find More Information. Any statement contained in the prospectus concerning the provisions of any document filed as an exhibit to the registration statement or otherwise filed with the Securities and Exchange Commission is not necessarily complete, and in each instance, reference is made to the copy of the document filed.

You should rely only on the information contained in or incorporated by reference into this prospectus. No dealer, salesperson or any other person is authorized to give any information or to make any representation other than those contained in or incorporated by reference in this prospectus. If such information is given or representations are made, you may not rely on that information or those representations as having been authorized by us or by any selling securityholder. You should not assume that the information in this prospectus or any prospectus supplement is accurate as of any date other than the date on the front page of those documents. Our business, financial condition, results of operations and prospects may have changed since that date.

This prospectus may only be used where it is legal to sell the securities. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

In addition to the other information contained or incorporated by reference in this prospectus, you should carefully consider the risk factors contained in and incorporated by reference into this prospectus when evaluating an investment in our common stock. This prospectus and the documents incorporated by reference into this prospectus include forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (Securities Act), and Section 21E of the Securities Exchange Act of 1934, as amended (Exchange Act). All statements other than statements of historical fact are forward-looking statements for purposes of these provisions, including:

- any statement regarding the performance, or likely performance, or outcomes or economic benefits of any licensing or other agreement, including any agreement with Novartis Pharma AG or its affiliates, including whether or not such partner will elect to participate, terminate or otherwise make elections under any such partnership agreement or whether any regulatory authority required to enable such agreement will be obtained;

- any projections of revenues, estimated operating expenses or other financial items;

- any statements of the plans and objectives of management for future operations or programs;

- any statements regarding future operations, plans, regulatory filings or approvals;

- any statements on plans regarding proposed or potential clinical trials or new drug filing strategies or timelines;

Table of Contents

any statements concerning proposed new products or services;

any statements regarding pending or future mergers or acquisitions; and

any statements regarding future economic conditions or performance, and any statement of assumptions underlying any of the foregoing.

In some cases, forward-looking statements can be identified by the use of terminology such as anticipates, believes, continue, could, estimates expects, intends, may, plans, potential, predicts, should, or will or the negative of those terms or other comparable terms. These stat involve known and unknown risks, uncertainties and other factors that may cause industry trends or actual results, level of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these statements. Our actual results may differ significantly from the results discussed in such forward-looking statements. These factors include, but are not limited to, those listed under Risk Factors in this prospectus and Item 7 Management s Discussion and Analysis of Financial Condition and Results of Operations, Item 1 Business and elsewhere in our Annual Report on Form 10-K for the fiscal year ended December 31, 2008. All forward-looking statements and reasons why results may differ included in this prospectus are made as of the date hereof, and we assume no obligation to update any such forward-looking statement or reason why actual results might differ.

Table of Contents

SUMMARY

The following summary highlights information contained elsewhere, or incorporated by reference, in this prospectus. The following summary does not contain all the information that you should consider before investing in the securities offered by this prospectus. You should read this entire prospectus carefully, including the documents that we incorporate by reference into this prospectus. Unless otherwise indicated, CTI, Company, we, us, our and similar terms refer to Cell Therapeutics, Inc. and its subsidiaries.

Our Company

We develop, acquire and commercialize innovative treatments for cancer. Our goal is to build a leading biopharmaceutical company with a diversified portfolio of proprietary oncology drugs. Our research, development, acquisition and in-licensing activities concentrate on identifying and developing new, less toxic and more effective ways to treat cancer.

We are developing pixantrone (BBR 2778), a novel DNA major groove binder with an aza-anthracenedione molecular structure, differentiating it from anthracycline chemotherapy agents. A new chemical compound for the treatment of non-Hodgkin s lymphoma, or NHL, and various other hematologic malignancies, solid tumors, and immunological disorders, pixantrone is being developed to improve activity and safety in treating cancers currently treated with the anthracycline family of anti-cancer agents. Based on the outcome of our phase III EXTEND, or PIX 301, clinical trial, as described below, and on the basis of pre-NDA communication we received from the Food and Drug Administration, or FDA, relating to that phase III trial, we expect to begin a rolling New Drug Application, or NDA, submission to the FDA in the first half of 2009. If the NDA is granted priority review status, the FDA could provide a decision on the NDA as early as six months after the final submission of the NDA.

Pixantrone was studied in our EXTEND, or PIX301, clinical trial which is a phase III single-agent trial of pixantrone for patients with relapsed, aggressive non-Hodgkin s lymphoma who received two or more prior therapies and who were sensitive to treatment with anthracyclines. An interim analysis of the EXTEND study of pixantrone was performed by the independent Data Monitoring Committee in the third quarter of 2006 and the study was continued based on that review. The trial enrolled 140 patients who were randomized to receive either pixantrone or another single-agent drug currently used for the treatment of this patient population, as selected by the physician. In November 2008, we announced that this trial achieved the primary efficacy endpoint. Patients randomized to treatment with pixantrone achieved a significantly higher rate of confirmed and unconfirmed complete remissions compared to patients treated with standard chemotherapy, had a significantly increased overall response rate, experienced a statistically significant improvement in median progression free survival and had a low incidence of certain side effects, including severe neutropenia complicated by either fever or documented infections, severe vomiting or diarrhea and hair loss, a very common side effect of other drugs in this class. Overall, the incidence of serious adverse events was similar between pixantrone and the control arm. The pixantrone patients had a higher incidence of leucopenia and neutropenia and numerically more severe cardiac events than in the control arm. Disease progression reported as an adverse event was less frequent in the pixantrone arm than in the control arm.

In February 2009, we entered into an agreement with IDIS Limited, or IDIS, to manage pixantrone as an investigational drug on a named patient basis in Europe. Pixantrone will be supplied by IDIS to healthcare professionals for the treatment of individual patients with relapsing aggressive non-Hodgkin s lymphoma. The program is expected to be initiated by the second quarter of 2009.

We also conducted the RAPID, or PIX203, phase II study (CHOP-R vs. CPOP-R) in which pixantrone is substituted for doxorubicin in the CHOP-R regimen compared to the standard CHOP-R regimen in patients with aggressive NHL. An interim analysis of the RAPID study, reported in July 2007, showed that to date, a majority of patients on both arms of the study achieved a major objective anti-tumor response (complete response or partial response). Patients on the pixantrone arm of the study had clinically significant less left ventricular ejection fraction (LVEF) drops, infections, and thrombocytopenia (a reduction in platelets in the blood), as well as significant reduction in febrile neutropenia. In early 2008, we closed enrollment on the RAPID trial because we had adequate sample size to demonstrate differences in cardiac events and other clinically relevant side effects between pixantrone and doxorubicin. We expect to report results from this trial in the fourth quarter of 2009.

Table of Contents

We launched a phase III trial of pixantrone in indolent NHL, the PIX303 trial, in September 2007, which was designed to evaluate the combination of fludarabine, pixantrone and rituximab versus fludarabine and rituximab in patients who have received at least one prior treatment for relapsed or refractory indolent NHL. We closed the PIX303 trial in early 2008 based on, among other considerations, our plans to refocus our resources on obtaining pixantrone approval based on the EXTEND phase III trial before making additional substantive investments in alternative indications for pixantrone as well as the changing competitive landscape in second-line follicular NHL. In May 2007, we received fast track designation from the FDA for pixantrone for the treatment of relapsed or refractory indolent NHL.

We are developing OPAXIO (paclitaxel poliglumex), which we have previously referred to as XYOTAX, for the treatment of non-small cell lung cancer, or NSCLC, and ovarian cancer. While our STELLAR 2, 3 and 4 phase III clinical studies for OPAXIO, completed in the first half of 2005, did not meet their primary endpoints of superior overall survival, we believe that the reduction in toxicities coupled with superior convenience and less supportive care demonstrated in the STELLAR 4 phase III clinical trial merits consideration for approval as single-agent therapy for patients with advanced NSCLC who have poor performance status, or PS2. Currently there are no drugs approved for PS2 NSCLC patients. In March 2008, we submitted a Marketing Authorization Application, or MAA, to the European Medicines Agency, or EMEA, for first-line treatment of patients with advanced NSCLC who are PS2, based on a non-inferior survival and improved side effect profile which we believe was demonstrated in our STELLAR clinical trials. The application is based on a positive opinion we received from the EMEA s Scientific Advice Working Party, or SAWP; the EMEA agreed that switching the primary endpoint from superiority to non-inferiority is feasible if the retrospective justification provided in the marketing application is adequate. The discussions with the SAWP focused on using the STELLAR 4 study as primary evidence of non-inferiority and the STELLAR 3 study as supportive of the MAA. The application was accepted for review in April 2008 and the MAA has now entered the marketing approval review process, which generally takes 15 to 18 months. We expect to receive an opinion from the EMEA by June 2009.

We are also developing OPAXIO for women with pre-menopausal levels of estrogen, regardless of age, who have advanced NSCLC with normal or poor performance status. We believe the lack of safe and effective treatment for women with advanced first-line NSCLC, who have pre-menopausal estrogen levels, represents an unmet medical need. Based on a pooled analysis of STELLAR 3 and 4 phase III trials for treatment of first-line NSCLC PS2 patients, we believe that there is a demonstrated statistically significant survival advantage among women receiving OPAXIO when compared to women or men receiving standard chemotherapy. A survival advantage for women over men was also demonstrated in a first-line phase II clinical trial of OPAXIO and carboplatin, known as the PGT202 trial, supporting the potential benefit observed in the STELLAR 3 and 4 trials. In December 2005, we initiated a phase III clinical trial, known as the PIONEER, or PGT305, study for OPAXIO as first-line monotherapy in PS2 women with NSCLC, however, we agreed with the recommendation of the Data Safety Monitoring Board and closed the study in December 2006 due, in part, to the diminishing utility of the PIONEER trial given our plans to submit a new protocol to the FDA.

In early 2007, we submitted two new protocols under a Special Protocol Assessment, or SPA, to the FDA. The new protocols, known as PGT306 and PGT307, focus exclusively on NSCLC in women with pre-menopausal estrogen levels, the subset of patients where OPAXIO demonstrated the greatest potential survival advantage in the STELLAR trials. We initiated the PGT307 trial in September 2007. Although the FDA has established the requirement that two adequate and well-controlled pivotal studies demonstrating a statistically significant improvement in overall survival will be required for approval of OPAXIO in the NSCLC setting, we believe that compelling results from a single trial, PGT307, along with supporting evidence from prior clinical trials, may enable us to submit an NDA in the United States. In early 2008, we limited enrollment on the PGT307 study to U.S. sites only, until either approval of the MAA by the EMEA or until positive results from the GOG0212 trial of OPAXIO for first-line maintenance therapy in ovarian cancer, discussed below, are reported.

We are also developing OPAXIO as potential maintenance therapy for women with advanced stage ovarian cancer who achieve a complete remission following first-line therapy with paclitaxel and carboplatin. This study,

Table of Contents

the GOG0212 trial, is under the control of the Gynecologic Oncology Group, or GOG, and is expected to enroll 1,100 patients by early 2012. Based on the number of events in the database, we are requesting an interim analysis be conducted by the GOG in late 2009. If the GOG agrees to this timing and the interim analysis is successful, it could lead to an NDA filing in 2010.

As of March 9, 2009, we are engaged in the process of divesting our interest in the radiopharmaceutical product Zevalin® (ibritumomab tiuxetan) by selling our 50% interest in the Zevalin joint venture to Spectrum Pharmaceuticals, Inc., or Spectrum. Zevalin is a form of cancer therapy called radioimmunotherapy and is indicated for treatment of relapsed or refractory, low-grade or follicular B-cell NHL, including patients with rituximab refractory follicular NHL. Zevalin is also indicated, under accelerated approval, for the treatment of relapsed or refractory, rituximab-naïve, low-grade and follicular NHL. It was approved by the FDA in February 2002 as the first radioimmunotherapeutic agent for the treatment of NHL. We acquired the U.S. development, sales and marketing rights to Zevalin from Biogen Idec Inc., or Biogen, pursuant to an asset purchase agreement in December 2007. In December 2008, we formed a 50/50 owned joint venture with Spectrum, RIT Oncology, LLC, or RIT Oncology, to commercialize and develop Zevalin in the United States. We contributed all assets owned by us and exclusively related to Zevalin to that joint venture, including the Zevalin FDA registration, FDA dossier, U.S. trademark, trade name and trade dress, customer list, certain patents and the assignment of numerous contracts. We received an initial payment of $7.5 million at the closing of the initial formation of the joint venture, an additional $7.5 million in early January 2009 and we may receive up to $15 million in product sales milestone payments upon achievement of certain revenue targets.

The amended and restated operating agreement for the joint venture (the LLC Agreement) provides CTI with an option to sell to Spectrum our remaining 50% interest in the Zevalin joint venture for $18 million, as adjusted. Our board of directors made a strategic decision to focus our resources on developing pixantrone and our other products, and because the option provided the most viable source for non-dilutive financing, in February 2009, we exercised the option to sell our remaining interest in Zevalin. Upon satisfaction of certain closing conditions, Spectrum is obligated to deliver either the entire purchase price in a single payment, or at their option, one-third of the purchase price in cash, plus a full-recourse, non-interest bearing secured promissory note for the remaining two-thirds of the purchase price, within 30 days following the exercise of the option. On March 2, 2009, we received $6.5 million (a portion of which was used to pay a consent fee to Biogen) of the purchase price and will receive the remaining balance of the purchase price of approximately $10.0 million to $11.5 million within 90 days following the closing of the sale of our interest; however, as of March 9, 2009, we are currently in discussions with Spectrum to finalize the terms of the transaction, including the timing of the payment schedule. As a result of the sale option transaction, CTI will have transferred all ownership and control of Zevalin to Spectrum.

In addition, on June 16, 2008, we entered into an Access Agreement with Bayer Schering Pharma AG, or Bayer, which holds the rights to Zevalin outside of the United States. Under the agreement, Bayer gave us access to data from Bayer s phase III first-line indolent trial, or FIT trial, of Zevalin. Under the terms of the agreement with Bayer, we made an initial payment to Bayer of $2 million. We submitted a supplemental biologics license application, or sBLA, on September 30, 2008 for use of Zevalin in consolidation therapy of first remission in advanced stage follicular NHL based on the data received from Bayer; that sBLA was also contributed to the joint venture. In connection with the joint venture transaction, the Access Agreement was assigned to RIT Oncology.

We are developing brostallicin through our wholly-owned subsidiary Systems Medicine LLC or SM, which holds worldwide rights to use, develop, import and export brostallicin, a synthetic DNA minor groove binding agent that has demonstrated anti-tumor activity and a favorable safety profile in clinical trials in which more than 230 patients have been treated to date. SM currently uses a genomic-based platform to guide development of brostallicin. We expect to use that platform to guide development of our licensed oncology products in the future. We also have a strategic affiliation with the Translational Genomics Research Institute, or TGen, and have the ability to use TGen s extensive genomic platform and high throughput capabilities to target a cancer drug s context-of-vulnerability, which is intended to guide clinical trials toward patient populations where the highest likelihood of success should be observed, thereby potentially lowering risk and shortening time to market.

A phase II study of brostallicin in relapsed/refractory soft tissue sarcoma met its predefined activity and safety hurdles and resulted in a first-line phase II study that is currently being conducted by the European Organization for Research and Treatment of Cancer, or EORTC. Planned enrollment for this study was completed in August 2008 and the EORTC plans to conduct the final data analysis in 2009. Brostallicin has also

Table of Contents

demonstrated synergy with new targeted agents as well as established treatments in preclinical trials; consequently, we began a multi-arm combination study with brostallicin and other agents, including Avastin (bevacizumab) which was substantially completed in the fourth quarter of 2008.

We acquired our rights to brostallicin through our acquisition of Systems Medicine Inc., a privately held oncology company, completed in July 2007 through a stock-for-stock merger valued at $20 million. Systems Medicine Inc. stockholders can also receive a maximum of $15 million in additional consideration (payable in cash or stock at our election, subject to certain NASDAQ limitations on issuance of stock) upon the achievement of certain FDA regulatory milestones.

We are currently focusing our efforts on pixantrone, OPAXIO, brostallicin and bisplatinates.

We were incorporated in Washington in 1991. Our principal executive offices are located at 501 Elliott Avenue West, Suite 400, Seattle, Washington 98119. Our telephone number is (206) 282-7100. The address for our website is http://www.celltherapeutics.com. We make available free of charge on our website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and other filings pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and amendments to such filings, as soon as reasonably practicable after each is electronically filed with, or furnished to, the Securities and Exchange Commission, or the SEC.

CTI and OPAXIO are our proprietary marks. RIT Oncology owns the rights to the mark Zevalin for use in the United States. All other product names, trademarks and trade names referred to in this prospectus are the property of their respective owners.

Recent Developments

Debt and Equity Restructurings

We have a substantial amount of debt outstanding, and our annual interest expense with respect to our debt is significant. Beginning in December 2007 and continuing through 2008, we completed restructurings of various series of our convertible notes which retired a portion of such debt, extended the maturity date on certain such debt and involved the issuance of additional convertible notes and shares of common stock to holders of the exchanged notes. As of December 31, 2008 we had an aggregate principal balance of approximately $142.2 million in convertible notes with interest rates ranging from 4% to 10%.

On December 5, 2008, we announced via press release that our Board of Directors had authorized a modified Dutch tender offer seeking to repurchase a portion or all of an aggregate of $124 million of our outstanding 4% Convertible Senior Subordinated Notes due 2010, 5.75% Convertible Senior Notes due 2011, 6.75% Convertible Senior Notes due 2010, 7.5% Convertible Senior Notes due 2011 and 9% Convertible Senior Notes due 2012 at a significant discount to the notes par value. We continue to desire to pursue the tender offer as part of our recapitalization plan, but as of March 16, 2009 the tender offer for this debt has not commenced. The tender offer, if commenced, will be made solely by and subject to the terms and conditions set forth in a Schedule TO (including the Offer to Purchase and related Letter of Transmittal) that we will file with the SEC.

In early February 2009, we issued 6,702 shares of new Series F preferred stock in exchange for our Series A 3% convertible preferred stock, our Series B 3% convertible preferred stock and our Series C 3% convertible preferred stock. As of March 12, 2009, 100 shares of our Series A 3% convertible preferred stock, 1,000 shares of our Series D 7% convertible preferred stock and 6,702 shares of our Series F preferred stock were outstanding.

The Series F Preferred Stock has no fixed dividend rate, has an initial liquidation preference of $1,000 per share, and if and when it becomes convertible, shall be convertible into Common Stock at the option of the holder at a conversion price of $0.14 per share. The Series F Preferred Stock becomes convertible on the later of April 1, 2009 or the day our authorized number of shares of Common Stock is increased. Each share of Series F Preferred Stock votes together with all other shares of common stock and preferred stock as if part of a single class and is entitled to 7,142.9 votes per share of Series F Preferred Stock in any such vote.

Table of Contents

Restructuring of Resources

On January 30, 2008, we announced a plan to refocus our resources on late-stage and marketed products, which involves increasing sales of Zevalin in the United States and preparing the marketing applications for OPAXIO and pixantrone described above, while advancing the clinical development of brostallicin. This plan was intended to reduce operating expenses and projected net cash operating expenses. As part of these refocusing efforts, approximately 30 of our U.S. employees were terminated. We continue to explore ways to further reduce our operating expenses for 2009.

In November 2007, we moved to reduce expenses related to having a subsidiary in Milan by converting our Bresso subsidiary into a corporate branch. This conversion reduced significant costs associated with legal and overlapping independent auditor expenses. On February 6, 2009, we announced that we engaged the services of a strategic advisory consulting firm to assist in developing strategic options for a partnership, asset divestment or joint venture for our Bresso corporate branch. However, to date we have not been able to find an adequate partner or buyer for those operations and have therefore notified the trade union representing our employees in Bresso that we intend to close our Italian operations and implement a collective dismissal procedure under Italian law relating to all 62 remaining employees at our Bresso facility. While we believe our relations with our employees to be good, there is the possibility that our employees in Italy may go on strike in relation to our negotiations with the Trade Unions relating to employee dismissals connected to closing the facility in Bresso.

As of March 9, 2009, we are engaged in the process of divesting our interest in Zevalin by selling our 50% interest in the Zevalin joint venture to Spectrum. The LLC Agreement provides CTI with an option to sell to Spectrum our remaining 50% interest in the Zevalin joint venture for $18 million, as adjusted. Our board of directors made a strategic decision to focus our resources on developing pixantrone and our other products, and because the option provided the most viable source for non-dilutive financing in February 2009, we exercised the option to sell our remaining interest in Zevalin. Upon satisfaction of certain closing conditions, Spectrum is obligated to deliver either the entire purchase price in a single payment, or at their option, one-third of the purchase price in cash, plus a full-recourse, non-interest bearing secured promissory note for the remaining two-thirds of the purchase price, within 30 days following the exercise of the option. On March 2, 2009, we received $6.5 million (a portion of which was used to pay a consent fee to Biogen) of the purchase price and will receive the remaining balance of the purchase price of approximately $10.0 million to $11.5 million within 90 days following the closing of the sale of our interest; however, as of March 9, 2009, we are currently in discussions with Spectrum to finalize the terms of the transaction, including the timing of the payment schedule. As a result of the sale option transaction, CTI will have transferred all ownership and control of Zevalin to Spectrum.

Lack of Liquidity

As of December 31, 2008 we had cash and cash equivalents, securities available-for-sale and interest receivable of approximately $10.7 million, and total current liabilities of $42.3 million. Our current cash and cash equivalents, securities available-for-sale and interest receivable continue to be significantly less than our total current liabilities. As of March 9, 2009, we are engaged in the process of negotiating the transaction terms, including terms of payment, related to the sale of our 50% interest in the Zevalin joint venture to Spectrum and, upon finalizing the terms of the sale, we expect to receive approximately an additional $10.0 million to $11.5 million from Spectrum no later than 90 days following the closing. Our existing cash and cash equivalents, securities available-for-sale and interest receivable including proceeds from offerings to date as well as the additional funds of approximately $10.0 million to $11.5 million to be received from Spectrum is not sufficient to fund our presently anticipated operations beyond May 2009. See Risk Factors.

In addition, our auditors, Stonefield Josephson, have expressed substantial doubt about our ability to continue to operate as a going concern in their audit opinion dated March 16, 2009 in connection with our audited financial statements for the year ended December 31, 2008.

Recent Financings

In October 2008, we sold to a single institutional investor $24.7 million in principal amount of our 9.66% convertible senior notes due October 2011; of these gross proceeds, we used $10 million as a portion of the approximately $18.2 million repurchase price for approximately $18.2 million principal amount of our 15% convertible senior notes and related warrants to purchase common stock issued in June 2008 to such investor. The funds released to us from the escrow account established to pay the make-whole and interest payments on the 15% convertible senior notes were used to pay the remaining approximately $8.2 million of the repurchase price. In addition, approximately $7.2 million was placed in an escrow account to be used to make interest payments and make-whole payments on the 9.66% senior convertible notes for 12 months following the close of that offering.

In December 2008, we sold $32.7 million in principal amount of our 10% Convertible Senior Notes due 2011 (the 10% Convertible Notes) to the same institutional investor as in our October 2008 convertible note offering. In connection with the offering, we also repurchased, for approximately $29.0 million, approximately $30.0 million principal amount of our 15% Convertible Senior Notes due 2011 issued in June 2008

to the investor, our Series B 18.33% convertible Senior Notes due 2011 issued in August 2008 to the investor and our 9.66% Convertible Senior Notes due 2011 issued in October 2009 to the investor and warrants to purchase approximately 5.15 million shares of common stock issued in 2007 and 2008 to the investor. We used approximately $16.4 million of the $32.7 million in cash that we received from the offering of our 10% Convertible Senior Notes to repurchase these three series of convertible senior notes and warrants and we paid the remaining approximately $12.6 million of the repurchase price from funds released to us from the escrow account established to pay the make-whole and interest payments on the three series of convertible senior notes repurchased.

Table of Contents

Exchange Listing Matters

As our market capitalization did not comply with the minimum market capitalization requirements for companies listed on The NASDAQ Global Market, we had a hearing before a NASDAQ Listing Qualifications Panel (the Panel) in November 2008 and presented a plan for regaining compliance with the NASDAQ Marketplace Rules. The Panel approved a transfer of our listing to The NASDAQ Capital Market effective with the opening of trading on January 8, 2009, subject to our evidencing compliance with all applicable requirements for continued listing on The NASDAQ Capital Market, including a minimum market value of listed securities of $35 million or its alternative, as set forth in NASDAQ Marketplace Rule 4103(c)(3), by February 12, 2009.

On March 6, 2009, we were notified by NASDAQ that the NASDAQ Listing Qualifications Panel had determined to continue the listing of our common stock on The NASDAQ Capital Market, subject to the condition that, on or before April 6, 2009, we demonstrate compliance with all applicable standards for continued listing on The NASDAQ Capital Market, including the $35 million market value of listed securities requirement or one of its alternatives. The panel also advised that The NASDAQ Marketplace Rules do not allow for an extension for compliance beyond April 6, 2009. In addition, the Panel issued a public reprimand for our prior failures to comply with the shareholder approval requirements and late filing of Listing of Additional Shares forms.

Our stock is also traded on the MTA stock market in Milan, Italy. In the event our common stock is delisted from the NASDAQ markets, we currently expect that our common stock would be eligible to be listed on the OTC Bulletin Board or Pink Sheets. We do not know what impact delisting from the NASDAQ markets may have on our listing with Borsa Italiana. In the event our common stock is delisted, the remaining holders of our Series A and Series D preferred stock may elect to have its shares redeemed at 130% of the stated value of the Series A and Series D preferred stock plus all accrued but unpaid dividends or other payments due on such shares.

Table of Contents

The Borsa Italiana and *Commissione Nazionale per le Società e la Borsa*, or CONSOB, have made several requests for information asking us to provide additional clarifications about our business operations and financial condition, and we have complied with such requests and have met with CONSOB on several occasions to answer questions. On February 10, 2009, we were notified that the Borsa Italiana had indefinitely halted trading of our common stock on the MTA stock market in Milan, Italy. As result of such action, NASDAQ also halted trading of our common stock on the same day. Following the issuance of a press release in Italy in response to information requested by CONSOB regarding the our business operations and financial condition, which was also furnished as a Current Report on Form 8-K filed on February 17, 2009, the Borsa Italiana re-initiated trading in the our shares with the open of trading in Italy on February 18, 2009. NASDAQ re-initiated trading in our shares prior to the open of the regular trading session on NASDAQ on February 18, 2009.

Table of Contents

RISK FACTORS

You should carefully consider the risks described below and other information in this prospectus and in the documents incorporated by reference into this prospectus before deciding to invest in our securities. Additional risks and uncertainties that we do not presently know or that we currently deem immaterial may also impair our business, financial condition, operating results and prospects. If any of the following risks actually occur, they could materially adversely affect our business, financial condition, operating results or prospects. In that case, the trading price of our securities could decline.

Factors Affecting Our Operating Results and Financial Condition

We need to raise additional funds and expect that we will need to continue to raise funds in the future, and funds may not be available on acceptable terms, or at all; failure to raise significant additional funds may cause us to cease development of our products and operations.

We have substantial operating expenses associated with the development of our product candidates and as of December 31, 2008 we had cash and cash equivalents, securities available-for-sale and interest receivable of approximately $10.7 million, which does not take into account $7.5 million in gross proceeds received from Spectrum in January 2009 in connection with the initial formation of RIT Oncology, or $6.5 million in gross proceeds received from Spectrum in March 2009 in connection with the sale of our 50% interest in RIT Oncology to Spectrum. As of March 9, 2009, we are engaged in the process of negotiating the transaction terms related to this sale with Spectrum and, upon finalizing the terms of that sale, we expect to receive approximately an additional $10.0 million to $11.5 million from Spectrum no later than 90 days following the closing. As of December 31, 2008, our total current liabilities were approximately $42.3 million and we also had a substantial amount of debt outstanding. The aggregate principal balance of our debt as of December 31, 2008 was approximately $142.2 million in convertible notes with interest rates ranging from 4% to 10% which does not take into account $18.0 million in conversions of our 10% notes due 2011. We expect that our existing cash and cash equivalents, securities available-for-sale, interest receivable, proceeds received from our offerings to date as well as the additional funds of approximately $10.0 million to $11.5 million to be received from Spectrum will not provide sufficient working capital to fund our presently anticipated operations beyond May 2009 and we therefore need to raise additional capital.

Table of Contents

We may seek to raise such capital through public or private equity financings, partnerships, joint ventures, dispositions of assets, debt financings or restructurings, bank borrowings or other sources. However, additional funding may not be available on favorable terms or at all. If adequate funds are not otherwise available, we will further curtail operations significantly, including the delay, modification or cancellation of operations and plans related to pixantrone, OPAXIO and brostallicin, and may be forced to cease operations, liquidate our assets and possibly seek bankruptcy protection. To obtain additional funding, we may need to enter into arrangements that require us to relinquish rights to certain technologies, drug candidates, products and/or potential markets, such as our transfer of Zevalin assets to RIT Oncology and our subsequent sale of our 50% interest in RIT Oncology. In addition, some financing alternatives may require us to meet additional regulatory requirements in Italy and the U.S., which may increase our costs and adversely affect our ability to obtain financing. To the extent that additional capital is raised through the sale of equity, or securities convertible into equity, shareholders may experience dilution of their proportionate ownership of us.

If our shareholders do not approve an increase in our authorized shares, we may not be able to raise additional funds through equity offerings.

Our shareholders have been asked to vote on a proposal to amend our articles of incorporation to increase the number of authorized shares of common stock at the special meeting of the shareholders to be held on March 24, 2009. Even though our quorum requirement has been reduced to one-third of the shares entitled to vote being present or represented at the meeting, the proposed amendment to the articles of incorporation requires an approval of a majority of the shares entitled to vote on the measure. There is a risk that we may not get shareholder approval to increase the number of authorized shares of common stock. Because of the number of shares reserved for issuance under various convertible securities, derivative securities and otherwise, we do not have enough shares authorized at present to effect an equity financing of any substantial amount. If we do not receive shareholder approval for the proposed increase in authorized shares, our ability to raise capital through equity financings may be adversely affected.

We need to implement a reduction in expenses across our operations.

We need substantial additional capital to fund our current operations. Even if we are able to secure additional financing on acceptable terms in the near future, we expect to implement a number of additional cost reduction initiatives, such as further reductions in the cost of our workforce and the discontinuation of a number of business initiatives to further reduce our rate of cash utilization and extend our existing cash balances. We believe that these additional cost reduction initiatives, if undertaken, will provide us with additional time to continue our pursuit of additional funding sources and also strategic alternatives. In the event that we are unable to obtain financing on acceptable terms and reduce our expenses, we may be required to limit or cease our operations, pursue a plan to sell our operating assets, or otherwise modify our business strategy, which could materially harm our future business prospects.

In November 2007, we converted our Bresso, Italy subsidiary into a corporate branch to reduce expenses related to having a subsidiary in Italy. In February 2009, in an effort to curtail the expenses related to our preclinical drug development operations in Bresso, Italy, we engaged a strategic advisory consulting firm to assist us with developing strategic options for a partnership, asset divestment or joint venture for our Italian branch. However, to date we have been unable to find an appropriate buyer or partner for the Bresso facility, therefore the Board has approved taking the appropriate steps to close that facility and cease our operations in Europe. In February 2009, we notified our employees at the Bresso facility that we would commence a collective dismissal procedure under Italian law, which gives us 75 days to consult with the Trade Unions in Italy regarding solutions that may reduce the social impact of the dismissal.

We expect to continue to incur net losses, and we might never achieve profitability.

We were incorporated in 1991 and have incurred a net operating loss every year. As of December 31, 2008, we had an accumulated deficit of approximately $1.3 billion. We are pursuing regulatory approval for

Table of Contents

pixantrone, OPAXIO and brostallicin. We will need to conduct research, development, testing and regulatory compliance activities and undertake manufacturing and drug supply activities, expenses which, together with projected general and administrative expenses, will result in operating losses for the foreseeable future. We may never become profitable, even if we are able to commercialize products currently in development or otherwise.

Our debt and operating expenses exceed our net revenues.

We have a substantial amount of debt outstanding, and our annual interest expense with respect to our debt is significant and we need to raise capital to continue to fund our operations. Unless we raise substantial additional capital and reduce our operating expenses, we will not be able to pay all of our operating expenses or repay our debt or the interest, liquidated damages or other payments that may become due with respect to our debt.

Our common stock is listed on The NASDAQ Capital Market and the MTA stock market in Milan, Italy and we may not be able to maintain those listings or trading on these exchanges may be halted or suspended, which may make it more difficult for investors to sell shares of our common stock.

Effective with the opening of trading on January 8, 2009, the U.S. listing of our common stock was transferred to The NASDAQ Capital Market, subject to meeting a minimum market value of listed securities of $35 million. The NASDAQ Listing Qualifications Panel (the Panel) approved this transfer after our market capitalization did not comply with the minimum market capitalization required for companies listed on The NASDAQ Global Market, and we presented a plan to the Panel for regaining compliance with the NASDAQ Marketplace Rules. On January 23, 2009, we received an Additional Staff Determination Letter (the Determination Letter) from The NASDAQ Stock Market (NASDAQ) that stated the NASDAQ staff had concluded that we had violated Marketplace Rule 4350(i)(1)(C), which requires shareholder approval in connection with an acquisition if the issuance or potential issuance is greater than 20% of the pre-acquisition shares outstanding, and that we had at times not complied with Marketplace Rule 4310(c)(17) regarding submission of a Listing of Additional Shares form. On February 18, 2009, we updated the Panel on our plan for regaining compliance and requested an extension of the deadline to regain compliance with the minimum market capitalization requirement for The NASDAQ Capital Market. On March 6, 2009, we were notified by NASDAQ that the Panel had determined to continue the listing of our common stock on The NASDAQ Capital Market, subject to the condition that, on or before April 6, 2009, we demonstrated compliance with all applicable standards for continued listing on The NASDAQ Capital Market, including the $35 million minimum market capitalization requirement. The panel also advised that The NASDAQ Marketplace Rules do not allow for an extension for compliance beyond April 6, 2009. In addition, the Panel issued a public reprimand for our prior failures to comply with the shareholder approval requirements and late filing of Listing of Additional Shares forms.

Even if we continue to be listed on The NASDAQ Capital Market, trading in our common stock may be halted or suspended due to market conditions or if NASDAQ, CONSOB or the Borsa Italiana determines that trading in our common stock is inadvisable. Trading in our common stock was halted by the Borsa Italiana on February 10, 2009, and, as a consequence, trading in our common stock was halted by NASDAQ. After we provided CONSOB with additional information and clarification on our business operations and financial condition as requested and published a press release containing such information in Italy, CONSOB and NASDAQ lifted the trading halt on our stock. CONSOB may make additional inquiries about our business and financial conditions at any time, and there can be no guarantee that CONSOB or NASDAQ will not halt trading in our shares again in the future.

If our common stock ceases to be listed for trading on The NASDAQ Stock Market, the MTA, or both for any reason or if trading in our stock is halted or suspended on The NASDAQ Stock Market, the MTA, or both, it may harm our stock price, increase the volatility of our stock price and make it more difficult for investors to buy or sell shares of our common stock. Moreover, if our common stock ceases to be listed for trading on The NASDAQ Stock Market or if trading in our stock is halted or suspended on The NASDAQ Stock Market, we

Table of Contents

may become subject to obligations to redeem certain shares of preferred stock at a premium and/or repay on an accelerated basis certain convertible notes. In addition, if we are not listed on The NASDAQ Stock Market and/or if our public float remains below $75 million, we will be limited in our ability to file new shelf registration statements on SEC Form S-3 and/or to fully use one or more registration statements on SEC Form S-3. We have relied significantly on shelf registration statements on SEC Form S-3 for most of our financings in recent years, so any such limitations may have a material adverse effect on our ability to raise the capital we need.

The global financial crisis may have an impact on our business and financial condition in ways that we currently cannot predict, and may further limit our ability to raise additional funds.

The continued credit crisis and related turmoil in the global financial system has had and may continue to have an impact on our business and our financial condition. We may face significant challenges if conditions in the financial markets do not improve or continue to worsen. In particular, our ability to access the capital markets and raise funds required for our operations may be severely restricted at a time when we would like, or need, to do so, which could have an adverse effect on our ability to meet our current and future funding requirements and on our flexibility to react to changing economic and business conditions.

We have received audit reports with a going concern disclosure on our consolidated financial statements.

Due to our need to raise additional financing to fund our operations and satisfy obligations as they become due, our independent registered public accounting firm has included an explanatory paragraph in their reports on our December 31, 2008 and 2007 consolidated financial statements regarding their substantial doubt as to our ability to continue as a going concern. This may have a negative impact on the trading price of our common stock and we may have a more difficult time obtaining necessary financing.

We are required to comply with the regulatory structure of Italy because our stock is traded on the MTA, which could result in administrative challenges.

Our stock is traded on the MTA stock market in Milan, Italy and we are required to also comply with the rules and regulations of CONSOB, which is the public authority responsible for regulating the Italian securities market, and the Borsa Italiana, which ensures the development of the managed market in Italy. Collectively these agencies regulate companies listed on Italy s public markets. Conducting our operations in a manner that complies with all applicable laws and rules requires us to devote additional time and resources to regulatory compliance matters. For example, the process of seeking to understand and comply with the laws of each country, including tax, labor and regulatory laws, might require us to incur the expense of engaging additional outside counsel, accountants and other professional advisors and might result in delayed business initiatives as we seek to ensure that each new initiative will comply with all applicable regulatory regimes. In addition, the Borsa Italiana and CONSOB have made several requests for information asking us to provide additional clarifications about our business operations and financial condition, and we have complied with such requests and have met with CONSOB on several occasions to answer questions. Compliance with Italian regulatory requirements may delay additional issuances of our common stock; we are currently taking steps to attempt to conform to the requirements of the Italian stock exchange and CONSOB to allow such additional issuances.

In addition, under Italian law, we must publish a listing prospectus that has been approved by CONSOB prior to issuing common stock in any twelve-month period that exceeds 10% of the number of shares of common stock outstanding at the beginning of that period. We have attempted to publish a listing prospectus in Italy to cover our general offerings for the past two years, beginning in April 2007. After working with CONSOB to meet their requirements to publish that listing prospectus for the remainder of 2007, we were finally able to publish a listing prospectus in January 2008, however, that listing prospectus was limited to shares to be issued to Société Générale under the Step-Up Equity Financing Agreement we entered into with Société Générale in 2006, which has since terminated. After meeting with CONSOB in 2008 to further discuss their requirements for a more general listing prospectus, we filed a new listing prospectus on December 31, 2008 which has not yet been

Table of Contents

published. We are continuing to work with CONSOB to meet their requirements to publish this new listing prospectus. As a result, we are required to raise money using alternative forms of securities; for example, we use convertible preferred stock and convertible debt in lieu of common stock as convertible preferred stock and convertible debt are not subject to the 10% limitation imposed by Italian law.

We are subject to additional legal duties, additional operational challenges and additional political and economic risks related to our operations in Italy.

A portion of our business is currently based in Italy, although we are seeking to divest our Italian assets or, alternatively, shut down our operations in Italy. However, as long as we continue to have operations in Italy, we are subject to duties and risks arising from doing business in Italy, such as:

- Italian employment law, including collective bargaining agreements negotiated at the national level and over which we have no control and which may complicate our efforts to divest or cease our Italian operations;
- European data protection regulations, under which we will be unable to send private personal data, including many employment records and some clinical trial data, from our Italian offices to our U.S. offices until our U.S. offices self-certify their adherence to the safe harbor framework established by the U. S. Department of Commerce in consultation with the European Commission;
- tariffs, customs, duties and other trade barriers; and
- capital controls, terrorism and other political risks.

We are also subject to the following operational challenges, among others, as a result of having a portion of our business and operations based in Italy:

- effectively pursuing the clinical development and regulatory approvals of all product candidates;
- successfully commercializing products under development;
- coordinating research and development activities to enhance introduction of new products and technologies;
- coalescing the Italian business culture with our own and maintaining employee morale; and
- maintaining appropriate uniform standards, controls, procedures and policies relating to financial reporting and employment-related matters, and the conduct of development activities that comply with both U.S. and Italian laws and regulations.

We may not succeed in addressing these challenges, risks and duties, any of which may be exacerbated by the geographic separation of our operations in the United States and in Italy. These risks related to doing business in Italy could harm the results of our operations.

Our operations in Italy make us subject to increased risk regarding currency exchange rate fluctuations.

As long as we continue to have operations in Italy, we are exposed to risks associated with foreign currency transactions insofar as we use U.S. dollars to make contract payments denominated in euros or vice versa. As the net positions of our foreign currency transactions might fluctuate, our earnings might be negatively affected. In addition, we are exposed to risks associated with the translation of euro-denominated financial

results and accounts into U.S. dollars. Our reporting currency will remain as the U.S. dollar; however, so long as we continue to have operations in Italy, a portion of our consolidated financial obligations will arise in euros. In addition, as long as we continue to have operations in Italy, the carrying value of some of our assets and liabilities will be affected by fluctuations in the value of the U.S. dollar as compared to the euro. Changes in the value of the U.S. dollar as compared to the euro might have an adverse effect on our reported results of operations and financial condition.

Table of Contents

We have reported material weaknesses in our internal control over financial reporting and if material weaknesses are discovered in the future, our stock price and investor confidence in us may be adversely affected.

A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting, such that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. We identified that as of December 31, 2006 we had material weaknesses in our European branch relative to the effectiveness of our internal control over financial reporting which were remedied during 2007.

The existence of a material weakness is an indication that there is a reasonable possibility that a material misstatement of our annual or interim financial statements will not be prevented or detected on a timely basis. If we fail to maintain an effective system of internal controls, we may not be able to report our financial results accurately, which may deprive management of important financial information needed to manage the Company effectively, may cause investors to lose confidence in our reported financial information and may have an adverse effect on the trading price of our common stock.

Our financial condition may be adversely affected if Spectrum Pharmaceuticals, Inc. becomes insolvent, experiences other financial hardship or defaults in the performance of contractual obligations.

Because we do not currently have any marketed products producing revenue, our business is dependent on the performance by third parties, including Spectrum, of their responsibilities under contractual relationships, including the timely payment by Spectrum of the remaining purchase price for the sale of our remaining 50% interest in RIT Oncology. If Spectrum were to default on the performance of its obligations in connection with the sale, we could suffer significant financial losses and operational problems, which could in turn adversely affect our financial performance, cash flows or results of operations and may jeopardize our ability to maintain our operations. Additionally, if RIT Oncology fails to perform its obligations owed to Biogen under certain Zevalin related contracts, including the payment of any milestones, Biogen may look to us in connection with those obligations under the guarantee in favor of Biogen. Spectrum is required to reimburse us for payment of such obligations based upon our percentage ownership of RIT Oncology, and we are dependent on Spectrum to fulfill such reimbursement obligation.

We may not realize any royalties, milestone payments or other benefits under the License and Co-Development Agreement entered into with Novartis Pharmaceutical Company Ltd.

We have entered into a License and Co-Development agreement related to OPAXIO and pixantrone with Novartis International Pharmaceutical Ltd., or Novartis, pursuant to which Novartis received an exclusive worldwide license for the development and commercialization of OPAXIO and an option to enter into an exclusive worldwide license to develop and commercialize pixantrone. We will not receive any royalty or milestone payments under this agreement unless Novartis exercises its option related to pixantrone and we are able to reach a definitive agreement or Novartis elects to participate in the development and commercialization of OPAXIO. Novartis is under no obligation to make such election or exercise such right and may never do so. In addition, even if Novartis exercises such rights, any royalties and milestone payments we may be eligible to receive from Novartis are subject to the receipt of the necessary regulatory approvals and the attainment of certain sales levels. In the event Novartis does not elect to participate in the development of OPAXIO or pixantrone, we may not be able to find another suitable partner for the commercialization and development of those products, which may have an adverse effect on our ability to bring those drugs to market. In addition, we would need to obtain a release from Novartis prior to entering into any agreement to develop and commercialize pixantrone or OPAXIO with a third party. We may never receive the necessary regulatory approvals and our products may not reach the necessary sales levels to generate royalty or milestone payments even if Novartis elects to exercise its option with regard to pixantrone or to participate in the development and commercialization of OPAXIO. Novartis has the right under the agreement in its sole discretion to terminate such agreement at any time on written notice to us.

Table of Contents

We may be delayed, limited or precluded from obtaining regulatory approval of OPAXIO given that our three STELLAR phase III clinical trials for the treatment of non-small cell lung cancer did not meet their primary endpoints.

There are no guarantees that we will obtain regulatory approval to manufacture or market any of our drug candidates. Obtaining regulatory approval to market drugs to treat cancer is expensive, difficult and risky. Preclinical and clinical data can be interpreted in different ways, which could delay, limit or preclude regulatory approval. Negative or inconclusive results or adverse medical events during a clinical trial could delay, limit or prevent regulatory approval.

Our future financial success depends in part on obtaining regulatory approval of OPAXIO. In March 2005, we announced the results of STELLAR 3, and in May 2005, we announced the results of STELLAR 2 and 4, our phase III clinical trials of OPAXIO in non-small cell lung cancer. All three trials failed to achieve their primary endpoints of superior overall survival compared to current marketed agents for treating NSCLC.

In December 2006, we closed the PIONEER clinical trial, and in 2007 we initiated a new study in the United States, PGT307, which focuses on the primary efficacy endpoint of survival in women with NSCLC and pre-menopausal estrogen levels. To conserve limited financial resources, we have decided not to initiate an additional study, the PGT306 trial, for which we have submitted a special protocol assessment, or SPA. We also feel that compelling evidence from one trial, the PGT307 trial, along with supporting evidence from earlier clinical trials, may be adequate to submit an NDA for OPAXIO even though the FDA has established a requirement that two adequate and well-controlled pivotal studies demonstrating a statistically significant improvement in overall survival will be required for approval of OPAXIO in the NSCLC setting. We may not receive compelling evidence or any positive results from the PGT307 trial, which would preclude our planned submission of an NDA to the FDA, and would preclude us from marketing OPAXIO in the United States.

Based on discussions with the EMEA Scientific Advice Working Party, we submitted an MAA for OPAXIO in Europe on March 4, 2008 based on results of the STELLAR trials. The MAA was accepted for review by the EMEA in April 2008, however a successful regulatory outcome from the EMEA is not assured as the EMEA s final opinion cannot be predicted until they have had the opportunity to complete a thorough review of the clinical data that was presented in the MAA. We expect to receive an opinion from the EMEA by June 2009.

We are subject to extensive government regulation.

We are subject to rigorous and extensive regulation by the FDA in the United States and by comparable agencies in other states and countries. Failure to comply with regulatory requirements could result in various adverse consequences, including possible delay in approval or refusal to approve a product, withdrawal of approved products from the market, product seizures, injunctions, regulatory restrictions on our business and sales activities, monetary penalties, or criminal prosecution.

Our products may not be marketed in the United States until they have been approved by the FDA and may not be marketed in other countries until they have received approval from the appropriate agencies. None of our current product candidates have received approval for marketing in any country. In March 2008, we submitted an MAA to the EMEA for OPAXIO. In April 2008, the EMEA accepted the MAA for review and we expect to receive an opinion from the EMEA by June 2009. In addition, we expect to begin submission of a rolling NDA to the FDA and request priority review for pixantrone to treat relapsed aggressive NHL in the first half of 2009. If priority review status is granted, the FDA could provide a decision on the NDA as early as six months after the final submission of the NDA. Obtaining regulatory approval requires substantial time, effort and financial resources, and we may not be able to obtain approval of any of our products on a timely basis, or at all. In addition, data obtained from clinical trials are susceptible to varying interpretations, and government regulators and our collaborators may not agree with our interpretation of our clinical trial results. If our products are not approved quickly enough to provide net revenues to defray our debt and operating expenses, our business and financial condition will be adversely affected.

Table of Contents

In the event that we receive marketing approval for any of our product candidates, we will be subject to numerous regulations and statutes regulating the manner of selling and obtaining reimbursement for those products. For example, federal statutes generally prohibit providing certain discounts and payments to physicians to encourage them to prescribe our product. Violations of such regulations or statutes may result in treble damages, criminal or civil penalties, fines or exclusion of CTI or its employees from participation in federal and state health care programs. Although we have policies prohibiting violations of relevant regulations and statutes, unauthorized actions of our employees or consultants, or unfavorable interpretations of such regulations or statutes may result in third parties or regulatory agencies bringing legal proceedings or enforcement actions against us. Because we will likely need to develop a new sales force for any future marketed products, we may have a greater risk of such violations from lack of adequate training or experience. The expense to retain and pay legal counsel and consultants to defend against any such proceedings would be substantial, and together with the diversion of management s time and attention to assist in any such defense, may negatively affect our financial condition and results of operations.

In addition, both before and after approval, our contract manufacturers and our products are subject to numerous regulatory requirements covering, among other things, testing, manufacturing, quality control, labeling, advertising, promotion, distribution and export. Manufacturing processes must conform to current Good Manufacturing Practice, or cGMPs. The FDA and other regulatory authorities periodically inspect manufacturing facilities to assess compliance with cGMPs. Accordingly, manufacturers must continue to expend time, money and effort to maintain compliance. Failure to comply with FDA, EMEA or other applicable regulations may cause us to curtail or stop the manufacture of such products until we obtain regulatory compliance.

The marketing and promotion of pharmaceuticals is also heavily regulated, particularly with regard to prohibitions on the promotion of products for off-label uses. In April 2007, we paid a civil penalty of $10.5 million and entered into a settlement agreement with the United States Attorney s Office, or USAO, for the Western District of Washington arising out of their investigation into certain of our prior marketing practices relating to TRISENOX, which was divested to Cephalon Inc. in July 2005. As part of that settlement agreement, and in connection with the acquisition of Zevalin we also entered into a corporate integrity agreement with the Office of Inspector General of the U.S. Department of Health and Human Services that requires us to establish a compliance committee and compliance program and adopt a formal code of conduct.

We face direct and intense competition from our competitors in the biotechnology and pharmaceutical industries, and we may not compete successfully against them.

Competition in the oncology market is intense and is accentuated by the rapid pace of technological development. We anticipate that we will face increased competition in the future as new companies enter the market. Our competitors in the United States and elsewhere are numerous and include, among others, major multinational pharmaceutical companies, specialized biotechnology companies and universities and other research institutions. Specifically:

Because pixantrone is intended to provide less toxic treatments to patients who have failed standard chemotherapy treatment, if we are successful in bringing pixantrone to market, it is not expected to compete directly with many existing chemotherapies. However, pixantrone will face competition from currently marketed anthracyclines, such as mitoxantrone (Novantrone®), and new anti-cancer drugs with reduced toxicity that may be developed and marketed.

If we are successful in bringing OPAXIO to market, we will face direct competition from oncology-focused multinational corporations. OPAXIO will compete with other taxanes. Many oncology-focused multinational corporations currently market or are developing taxanes, epothilones, and other cytotoxic agents, which inhibit cancer cells by a mechanism similar to taxanes, or similar products including, among others, Bristol-Myers Squibb Co. and others, which markets paclitaxel and generic forms of paclitaxel; Aventis, which markets docetaxel; Genentech, Roche and OSI Pharmaceuticals, which markets Tarceva ; Genentech and Roche, which markets Avastin , Eli Lilly, which markets

Table of Contents

Alimta®, and American Pharmaceutical Partners, which markets Abraxane . In addition, other companies such as NeoPharm Inc. and Telik, Inc. are also developing products which could compete with OPAXIO.

If we are successful in bringing brostallicin to market, we will face direct competition from other minor groove binding agents including Yondelis®, which is currently developed by PharmaMar and has received Authorization of Commercialization from the European Commission for soft tissue sarcoma.

Many of our competitors, either alone or together with their collaborators and, in particular, the multinational pharmaceutical companies, have substantially greater financial resources and development and marketing teams than us. In addition, many of our competitors, either alone or together with their collaborators, have significantly greater experience than we do in developing, manufacturing and marketing products. As a result, these companies products might come to market sooner or might prove to be more effective, less expensive, have fewer side effects or be easier to administer than ours. In any such case, sales of our products or eventual products would likely suffer and we might never recoup the significant investments we are making to develop these product candidates.

Uncertainty regarding third-party reimbursement and healthcare cost containment initiatives may limit our returns.

The ongoing efforts of governmental and third-party payors to contain or reduce the cost of healthcare may affect our ability to commercialize our products successfully. Governmental and other third-party payors continue to attempt to contain healthcare costs by:

challenging the prices charged for health care products and services,

limiting both coverage and the amount of reimbursement for new therapeutic products,

denying or limiting coverage for products that are approved by the FDA but are considered experimental or investigational by third-party payors,

refusing in some cases to provide coverage when an approved product is used for disease indications in a way that has not received FDA marketing approval, and

denying coverage altogether.

The trend toward managed healthcare in the United States, the growth of organizations such as health maintenance organizations, and legislative proposals to reform healthcare and government insurance programs could significantly influence the purchase of healthcare services and products, resulting in lower prices and reducing demand for our products. In addition, in almost all European markets, pricing and choice of prescription pharmaceuticals are subject to governmental control. Therefore, the price of our products and their reimbursement in Europe will be determined by national regulatory authorities.

Even if we succeed in bringing any of our proposed products to the market, they may not be considered cost-effective and third-party reimbursement might not be available or sufficient. If adequate third-party coverage is not available, we may not be able to maintain price levels sufficient to realize an appropriate return on our investment in research and product development. In addition, legislation and regulations affecting the pricing of pharmaceuticals may change in ways adverse to us before or after any of our proposed products are approved for marketing.

Even if our drug candidates are successful in clinical trials, we may not be able to successfully commercialize them.

Since our inception in 1991, we have dedicated substantially all of our resources to the research and development of our technologies and related compounds. All of our compounds currently are in research or development, and have not received marketing approval.

Table of Contents

Prior to commercialization, each product candidate requires significant research, development and preclinical testing and extensive clinical investigation before submission of any regulatory application for marketing approval. The development of anti-cancer drugs, including those we are currently developing, is unpredictable and subject to numerous risks. Potential products that appear to be promising at early stages of development may not reach the market for a number of reasons including that they may:

- be found ineffective or cause harmful side effects during preclinical testing or clinical trials,
- fail to receive necessary regulatory approvals,
- be difficult to manufacture on a scale necessary for commercialization,
- be uneconomical to produce,
- fail to achieve market acceptance, or
- be precluded from commercialization by proprietary rights of third parties.

The occurrence of any of these events could adversely affect the commercialization of our products. Products, if introduced, may not be successfully marketed and/or may not achieve customer acceptance. If we fail to commercialize products or if our future products do not achieve significant market acceptance, we will not likely generate significant revenues or become profitable.

If any of our license agreements for intellectual property underlying pixantrone, OPAXIO, brostallicin, or any other products are terminated, we may lose the right to develop or market that product.

We have licensed intellectual property, including patent applications relating to intellectual property for pixantrone and brostallicin. We have also in-licensed the intellectual property for our drug delivery technology relating to OPAXIO which uses polymers that are linked to drugs, known as polymer-drug conjugates. Some of our product development programs depend on our ability to maintain rights under these licenses. Each licensor has the power to terminate its agreement with us if we fail to meet our obligations under these licenses. We may not be able to meet our obligations under these licenses. If we default under any license agreement, we may lose our right to market and sell any products based on the licensed technology.

If we fail to adequately protect our intellectual property, our competitive position could be harmed.

Development and protection of our intellectual property are critical to our business. If we do not adequately protect our intellectual property, competitors may be able to practice our technologies. Our success depends in part on our ability to:

- obtain patent protection for our products or processes both in the United States and other countries,
- protect trade secrets, and
- prevent others from infringing on our proprietary rights.

When polymers are linked, or conjugated, to drugs, the results are referred to as polymer-drug conjugates. We are developing drug delivery technology that links chemotherapy to biodegradable polymers. For example, OPAXIO is paclitaxel, the active ingredient in Taxol®, one of the

world s best selling cancer drugs, linked to polyglutamate. We may not receive a patent for all of our polymer-drug conjugates and we may be challenged by the holder of a patent covering the underlying drug and/or methods for its use or manufacture.

The patent position of biopharmaceutical firms generally is highly uncertain and involves complex legal and factual questions. The U.S. Patent and Trademark Office has not established a consistent policy regarding the breadth of claims that it will allow in biotechnology patents. If it allows broad claims, the number and cost of patent interference proceedings in the United States and the risk of infringement litigation may increase. If it allows narrow claims, the risk of infringement may decrease, but the value of our rights under our patents,

Table of Contents

licenses and patent applications may also decrease. Patent applications in which we have rights may never issue as patents and the claims of any issued patents may not afford meaningful protection for our technologies or products. In addition, patents issued to us or our licensors may be challenged and subsequently narrowed, invalidated or circumvented. Litigation, interference proceedings or other governmental proceedings that we may become involved in with respect to our proprietary technologies or the proprietary technology of others could result in substantial cost to us. Patent litigation is widespread in the biotechnology industry, and any patent litigation could harm our business. Costly litigation might be necessary to protect a patent position or to determine the scope and validity of third-party proprietary rights, and we may not have the required resources to pursue any such litigation or to protect our patent rights. Any adverse outcome in litigation with respect to the infringement or validity of any patents owned by third parties could subject us to significant liabilities to third parties, require disputed rights to be licensed from third parties or require us to cease using a product or technology.

We also rely upon trade secrets, proprietary know-how and continuing technological innovation to remain competitive. Third parties may independently develop such know-how or otherwise obtain access to our technology. While we require our employees, consultants and corporate partners with access to proprietary information to enter into confidentiality agreements, these agreements may not be honored.

Our products could infringe on the intellectual property rights of others, which may cause us to engage in costly litigation and, if unsuccessful, could cause us to pay substantial damages and prohibit us from selling our products.

We attempt to monitor patent filings for patents that may be relevant to our products and product candidates in an effort to guide the design and development of our products to avoid infringement but have not conducted an exhaustive search. We may not be able to successfully challenge the validity of these patents and could be required to pay substantial damages, possibly including treble damages, for past infringement and attorneys fees if it is ultimately determined that our products infringe a third party s patents. Further, we may be prohibited from selling our products before we obtain a license, which, if available at all, may require us to pay substantial royalties. Moreover, third parties may challenge the patents that have been issued or licensed to us. Even if infringement claims against us are without merit, or if we challenge the validity of issued patents, lawsuits take significant time, may be expensive and may divert management attention from other business concerns.

We may be unable to obtain a quorum for meetings of our shareholders or obtain necessary shareholder approvals and therefore be unable to take certain corporate actions.

Our articles require that a quorum, consisting of one-third of the outstanding shares of voting stock, be represented in person or by proxy in order to transact business at a meeting of our shareholders. In addition, amendments to our articles, such as an amendment to increase our authorized capital stock, require the approval of a majority of our outstanding shares. A substantial majority of our common shares are held by Italian institutions and, under Italian laws and regulations, it is difficult to communicate with the beneficial holders of those shares to obtain votes. In 2006, when a quorum required a majority of the outstanding shares of our voting stock be represented in person or by proxy, we scheduled two annual meetings of shareholders but were unable to obtain quorum at either meeting. Following that failure to obtain quorum, we contacted certain depository banks in Italy where significant numbers of shares of our common stock were held and asked them to cooperate by making a book entry transfer of their share positions at Monte Titoli to their U.S. correspondent bank, who would then transfer the shares to an account of the Italian bank at a U.S. broker-dealer that is an affiliate of that bank. Certain of the banks contacted agreed to make the share transfer pursuant to these arrangements as of the record date of the meeting, subject to the relevant beneficial owner taking no action to direct the voting of such shares. Under Rule 452 of the New York Stock Exchange, the U.S. broker-dealer may vote shares absent direction from the beneficial owner on certain matters, such as the uncontested election of directors, an amendment to our articles of incorporation to increase authorized shares that are to be used for general corporate purposes, and the ratification of our auditors. As a result of this custody transfer, we were able to hold special meetings of the shareholders in April 2007 and January 2008 and annual meetings of the shareholders in September 2007 and

Table of Contents

June 2008 and we expect to have quorum at the special meeting of shareholders to be held on March 24, 2009. At the meeting in June 2008, our shareholders approved a proposal to reduce our quorum requirement from a majority of outstanding voting shares to one-third of outstanding voting shares. However, obtaining a quorum at future meetings even at the lower threshold and obtaining necessary shareholder approvals will depend in part upon the willingness of the Italian depository banks to continue participating in the custody transfer arrangements, and we cannot be assured that those banks that have participated in the past will continue to participate in custody transfer arrangements in the future. We are continuing to explore other alternatives to achieve quorum for and shareholder representation at our meetings; however, we cannot be certain that we will find an alternate method if we are unable to continue to use the custody transfer arrangements. As a result, we may be unable to obtain quorum at future annual or special meetings of shareholders or obtain shareholder approval of proposals when needed.

If we are unable to obtain a quorum at our shareholder meetings and thus fail to get shareholder approval of corporate actions, such failure could have a materially adverse effect on us. In addition, brokers may only vote on those matters for which broker discretionary voting is allowed under Rule 452, and we may not be able to obtain the required number of votes to approve certain proposals that require a majority of all outstanding shares to approve the proposal due to our reliance on broker discretionary voting. Therefore it is possible that even if we are able to obtain a quorum for our meetings of the shareholders we still may not receive enough votes to approve proxy proposals presented at such meeting and, depending on the proposal in question, including the proposal being submitted to the shareholders at the upcoming meeting on March 24, 2009 to increase the number of authorized shares of common stock, such failure could have a materially adverse effect on us.

We could fail in financing efforts or be delisted from NASDAQ if we fail to receive shareholder approval when needed.

We are required under the NASDAQ Marketplace Rules to obtain shareholder approval for any issuance of additional equity securities that would comprise more than 20% of our total shares of common stock outstanding before the issuance of such securities sold at a discount to the greater of book or market value in an offering that is not deemed to be a public offering by NASDAQ. Funding of our operations in the future may require issuance of additional equity securities that would comprise more than 20% of our total shares of common stock outstanding, but we might not be successful in obtaining the required shareholder approval for such an issuance, particularly in light of the difficulties we have experienced in obtaining a quorum and holding shareholder meetings as outlined above. If we are unable to obtain financing due to shareholder approval difficulties, such failure may have a material adverse effect on our ability to continue operations.

We may be unable to obtain the raw materials necessary to produce our OPAXIO product candidate in sufficient quantity to meet demand when and if such product is approved.

We may not be able to continue to purchase the materials necessary to produce OPAXIO, including paclitaxel, in adequate volume and quality. Paclitaxel is derived from certain varieties of yew trees and the supply of paclitaxel is controlled by a limited number of companies. Paclitaxel is available and we have purchased it from several sources. We purchase the raw materials paclitaxel and polyglutamic acid from single sources. Should the paclitaxel or polyglutamic acid purchased from our sources prove to be insufficient in quantity or quality, should a supplier fail to deliver in a timely fashion or at all, or should these relationships terminate, we may not be able to qualify and obtain a sufficient supply from alternate sources on acceptable terms, or at all.

Our dependence on third-party manufacturers means that we do not always have direct control over the manufacture, testing or distribution of our products.

We do not currently have internal analytical laboratory or manufacturing facilities to allow the testing or production and distribution of drug products in compliance with cGMPs. Because we do not directly control our suppliers, these vendors may not be able to provide us with finished product when we need it.

Table of Contents

We will be dependent upon these third parties to supply us in a timely manner with products manufactured in compliance with cGMPs or similar manufacturing standards imposed by US and/or foreign regulatory authorities where our products will be tested and/or marketed. While the FDA and other regulatory authorities maintain oversight for cGMP compliance of drug manufacturers, contract manufacturers and contract service providers may at times violate cGMPs. The FDA and other regulatory authorities may take action against a contract manufacturer who violates cGMPs. One of our products under development, OPAXIO, has a complex manufacturing process and supply chain, which may prevent us from obtaining a sufficient supply of drug product for the clinical trials and commercial activities currently planned or underway on a timely basis, if at all. The active pharmaceutical ingredients and drug products for pixantrone and brostallicin are both manufactured by a single vendor. Finished product manufacture and distribution for both pixantrone and brostallicin are to be manufactured and distributed by different single vendors.

If we do not successfully develop our products candidates into marketable products, we may be unable to generate significant revenue or become profitable.

We divested our commercial product, TRISENOX, in July 2005 and only acquired a new commercial product, Zevalin, in December 2007. We transferred Zevalin to RIT Oncology, a joint venture with Spectrum, in December 2008 and, as of March 9, 2009, are currently engaged in the process of selling our remaining interest in the joint venture (and therefore our remaining interest in Zevalin) to Spectrum. Unless we are able to develop one of our product candidates into an approved commercial product, we will not generate any significant revenues from product sales, royalty payments, license fees or otherwise. Pixantrone, OPAXIO and brostallicin are currently in clinical trials; these clinical trials may not be successful and, even if they are, we may not be successful in developing any of them into a commercial product. For example, our STELLAR phase III clinical trials for OPAXIO for the treatment of non-small cell lung cancer failed to meet their primary endpoints. In addition, a number of companies in the pharmaceutical industry, including us, have suffered significant setbacks in advanced clinical trials, even after reporting promising results in earlier trials. We will need to commit significant time and resources to develop these and any additional product candidates. Our product candidates will be successful only if:

- our product candidates are developed to a stage that will enable us to commercialize them or sell related marketing rights to pharmaceutical companies;
- we are able to commercialize product candidates in clinical development or sell the marketing rights to third parties; and
- our product candidates, if developed, are approved by the regulatory authorities.

We are dependent on the successful completion of these goals in order to generate revenues. The failure to generate such revenues may preclude us from continuing our research and development of these and other product candidates.

If we are unable to enter into new in-licensing arrangements, our future product portfolio and potential profitability could be harmed.

One component of our business strategy is in-licensing drug compounds developed by other pharmaceutical and biotechnology companies or academic research laboratories. All of our product candidates in clinical development are in-licensed from a third party, including pixantrone, OPAXIO and brostallicin.

Competition for new promising compounds and commercial products can be intense. If we are not able to identify future in-licensing opportunities and enter into future licensing arrangements on acceptable terms, our future product portfolio and potential profitability could be harmed.

Table of Contents

We may take longer to complete our clinical trials than we expect, or we may not be able to complete them at all.

Before regulatory approval for any potential product can be obtained, we must undertake extensive clinical testing on humans to demonstrate the safety and efficacy of the product. Although for planning purposes we forecast the commencement and completion of clinical trials, the actual timing of these events can vary dramatically due to a number of factors. For example:

- we may not obtain authorization to permit product candidates that are already in the preclinical development phase to enter the human clinical testing phase;
- authorized preclinical or clinical testing may require significant time, resources or expertise to those originally expected to be necessary;
- clinical testing may not show potential products to be safe and efficacious and, as with many drugs, may fail to demonstrate the desired safety and efficacy characteristics in human clinical trials;
- clinical testing may show that potential products are not appropriate for the specific indication for which they are being tested;
- the results from preclinical studies and early clinical trials may not be indicative of the results that will be obtained in later-stage clinical trials;
- we or regulatory authorities may suspend clinical trials at any time on the basis that the participants are being exposed to unacceptable health risks or for other reasons; and
- completion of clinical trials depends on, among other things, the number of patients available for enrollment in a particular trial, which is a function of many factors, including the number of patients with the relevant conditions, the nature of the clinical testing, the proximity of patients to clinical testing centers, the eligibility criteria for tests as well as competition with other clinical testing programs involving the same patient profile but different treatments.

We have limited experience in conducting clinical trials. We expect to continue to rely on third parties, such as contract research organizations, academic institutions and/or cooperative groups, to conduct, oversee and monitor clinical trials as well as to process the clinical results and manage test requests, which may result in delays or failure to complete trials if the third parties fail to perform or to meet the applicable standards.

If we fail to commence, complete, experience delays in any of our present or planned clinical trials, or need to perform more or larger clinical trials than planned, our development costs may increase and/or our ability to commercialize our product candidates may be adversely affected. If delays or costs are significant, our financial results and our ability to commercialize our product candidates may be adversely affected.

If we fail to establish and maintain collaborations or if our partners do not perform, we may be unable to develop and commercialize our product candidates.

We have entered into collaborative arrangements with third-parties to develop and/or commercialize product candidates and are currently seeking additional collaborations. For example, we entered into an agreement with the Gynecologic Oncology Group to perform a phase III trial of OPAXIO in patients with ovarian cancer. Additional collaborations might be necessary in order for us to fund our research and development activities and third-party manufacturing arrangements, seek and obtain regulatory approvals and successfully commercialize our existing and future product candidates. If we fail to enter into additional collaborative arrangements or fail to maintain our existing collaborative arrangements, the number of product candidates from which we could receive future revenues would decline. For example, in 2005 we sold our product TRISENOX to Cephalon and, pursuant to the terms of the purchase agreement under which TRISENOX was sold, we are entitled to

receive milestone payments upon the approval by the FDA of new labeled uses for TRISENOX; however, Cephalon may decide not to submit any additional information to the FDA to apply for label expansion of TRISENOX, in which case we would not receive a milestone payment under the agreement.

Table of Contents

Our dependence on collaborative arrangements with third parties will subject us to a number of risks that could harm our ability to develop and commercialize products, including that:

- collaborative arrangements may not be on terms favorable to us;
- disagreements with partners may result in delays in the development and marketing of products, termination of our collaboration agreements or time consuming and expensive legal action;
- we cannot control the amount and timing of resources partners devote to product candidates or their prioritization of product candidates and partners may not allocate sufficient funds or resources to the development, promotion or marketing of our products, or may not perform their obligations as expected;
- partners may choose to develop, independently or with other companies, alternative products or treatments, including products or treatments which compete with ours;
- agreements with partners may expire or be terminated without renewal, or partners may breach collaboration agreements with us;
- business combinations or significant changes in a partner s business strategy might adversely affect that partner s willingness or ability to complete its obligations to us; and
- the terms and conditions of the relevant agreements may no longer be suitable.

The occurrence of any of these events could adversely affect the development or commercialization of our products.

Because we base several of our drug candidates on unproven technologies, we may never develop them into commercial products.

We base several of our product candidates upon novel technologies that we are using to develop drugs for the treatment of cancer. These technologies have not been proven. Furthermore, preclinical results in animal studies may not predict outcomes in human clinical trials. Our product candidates may not be proven safe or effective. If these technologies do not work, our drug candidates will not develop into commercial products.

Because there is a risk of product liability associated with our products, we face potential difficulties in obtaining insurance.

Our business exposes us to potential product liability risks inherent in the testing, manufacturing and marketing of human pharmaceutical products, and we may not be able to avoid significant product liability exposure. While we have insurance covering the product use in our clinical trials for our product candidates, it is possible that we will not be able to maintain such insurance on acceptable terms or that any insurance obtained will not provide adequate coverage against potential liabilities. Our inability to obtain sufficient insurance coverage at an acceptable cost or otherwise to protect against potential product liability claims could prevent or limit the commercialization of any products we develop. A successful product liability claim in excess of our insurance coverage could exceed our net worth.

Since we use hazardous materials in our business, we may be subject to claims relating to improper handling, storage or disposal of these materials.

Our research and development activities involve the controlled use of hazardous materials, chemicals and various radioactive compounds. We are subject to international, federal, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of such materials and certain waste products. Although we believe that our safety procedures for handling and disposing of such materials comply with the standards prescribed by the regulations, the risk of accidental contamination or injury from these materials cannot

Table of Contents

be eliminated completely. In the event of such an accident, we could be held liable for any damages that result and any such liability not covered by insurance could exceed our resources. Compliance with environmental laws and regulations may be expensive, and current or future environmental regulations may impair our research, development or production efforts.

We may not be able to conduct animal testing in the future, which could harm our research and development activities.

Certain of our research and development activities involve animal testing. Such activities have been the subject of controversy and adverse publicity. Animal rights groups and other organizations and individuals have attempted to stop animal testing activities by pressing for legislation and regulation in these areas and by disrupting activities through protests and other means. To the extent the activities of these groups are successful, our business could be materially harmed by delaying or interrupting our research and development activities.

Risks Related To the Securities Markets

Our stock price is extremely volatile, which may affect our ability to raise capital in the future and may subject the value of your investment in our securities to sudden decreases.

The market price for securities of biopharmaceutical and biotechnology companies, including ours, historically has been highly volatile, and the market from time to time has experienced significant price and volume fluctuations that are unrelated to the operating performance of such companies. For example, during the twelve month period ended March 9, 2009, our stock price has ranged from a low of $0.05 to a high of $9.60. Fluctuations in the trading price or liquidity of our common stock may adversely affect the value of your investment in our common stock.

Factors that may have a significant impact on the market price and marketability of our securities include:

- announcements by us or others of results of preclinical testing and clinical trials and regulatory actions;
- announcements of technological innovations or new commercial therapeutic products by us, our collaborative partners or our present or potential competitors;
- our issuance of additional debt, equity or other securities, which we need to pursue in 2009 to generate additional funds to cover our current debt and operating expenses;
- our quarterly operating results;
- developments or disputes concerning patent or other proprietary rights;
- developments in our relationships with collaborative partners;
- acquisitions or divestitures;
- litigation and government proceedings;
- adverse legislation, including changes in governmental regulation;

third-party reimbursement policies;

changes in securities analysts recommendations;

short selling;

changes in health care policies and practices;

halting or suspension of trading in our common stock by NASDAQ, CONSOB or the Borsa Italiana;

economic and other external factors; and

general market conditions.

Table of Contents

In the past, following periods of volatility in the market price of a company s securities, securities class action litigation has often been instituted. For example, in the case of our Company, beginning in March 2005, several class action lawsuits were instituted against us and certain of our directors and officers and a derivative action lawsuit was filed against our full board of directors. While these lawsuits were dismissed with prejudice, as a result of these types of lawsuits, we could incur substantial legal fees and our management s attention and resources could be diverted from operating our business as we respond to the litigation. We maintain significant insurance to cover these risks for the Company and our directors and officers, but our insurance is subject to high deductibles to reduce premium expense, and there is no guarantee that the insurance will cover any specific claim that we may face in the future, or that it will be adequate to cover all potential liabilities and damages.

Anti-takeover provisions in our charter documents and under Washington law could make removal of incumbent management or an acquisition of us, which may be beneficial to our shareholders, more difficult.

Provisions of our articles of incorporation and bylaws may have the effect of deterring or delaying attempts by our shareholders to remove or replace management, to commence proxy contests, or to effect changes in control. These provisions include:

- a classified board so that only approximately one third of the board of directors is elected each year;
- elimination of cumulative voting in the election of directors;
- procedures for advance notification of shareholder nominations and proposals;
- the ability of our board of directors to amend our bylaws without shareholder approval; and
- the ability of our board of directors to issue shares of preferred stock without shareholder approval upon the terms and conditions and with the rights, privileges and preferences as the board of directors may determine.

In addition, as a Washington corporation, we are subject to Washington law which imposes restrictions on some transactions between a corporation and certain significant shareholders. These provisions, alone or together, could have the effect of deterring or delaying changes in incumbent management, proxy contests or changes in control.

Table of Contents

USE OF PROCEEDS

All securities of our common stock offered by this prospectus are being registered for the account of the selling securityholders. We will not receive any of the proceeds from the sale of these securities. However, if a holder exercises a warrant in order to obtain underlying shares of common stock to sell, we would receive cash (if the exercise price is paid in cash.) The exercise price of these warrants range from $20.20 to $64.80 per share.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our common stock and do not currently anticipate declaring or paying cash dividends on our common stock in the foreseeable future. Except for dividends payable on the Series A 3% Convertible Preferred Stock and the Series D 7% Convertible Preferred Stock, we currently intend to retain all of our future earnings, if any, to finance operations. Any future determination relating to our dividend policy will be made at the discretion of our board of directors and will depend on a number of factors, including future earnings, capital requirements, financial conditions, future prospects, contractual restrictions and other factors that our board of directors may deem relevant.

Table of Contents

PRICE RANGE OF COMMON STOCK

Our common stock is traded on The NASDAQ Capital Market under the symbol CTIC. The following table sets forth, for the periods indicated, the high and low sales prices per share of our common stock as reported by NASDAQ.

	High	Low
Year ending December 31, 2009:		
First Quarter (through March 13, 2009)	$ 0.16	$ 0.05
Year ending December 31, 2008:		
Fourth Quarter	$ 0.89	$ 0.12
Third Quarter	$ 4.90	$ 0.58
Second Quarter	$ 9.60	$ 4.60
First Quarter	$ 19.90	$ 4.70
Year ended December 31, 2007:		
Fourth Quarter	$ 38.90	$ 15.90
Third Quarter	$ 49.70	$ 30.00
Second Quarter	$ 75.60	$ 28.50
First Quarter	$ 72.40	$ 56.40

RATIO OF EARNINGS TO FIXED CHARGES

The following table sets forth our ratio of earnings to fixed charges for each of the periods indicated.

	Year Ended December				
	2004	2005	2006	2007	2008
	(dollars in thousands)				
Ratio of earnings to fixed charges(1)					

(1) Earnings were not sufficient to cover fixed charges, earnings consist of income (loss) before provision for income taxes plus fixed charges. Fixed charges consist of interest charges and that portion of rental payments under operating leases we believe to be representative of interest. Earnings for the years ended December 31, 2004, 2005, 2006, 2007 and 2008, were insufficient to cover fixed charges by $252.3, $102.5, $135.8, $148.3 and $202.9 (in millions) respectively. For this reason, no ratios are provided for these periods.

Table of Contents

DESCRIPTION OF CAPITAL STOCK

This summary does not purport to be complete and is subject to, and qualified in its entirety by, the provisions of our amended and restated articles of incorporation, our bylaws, as amended, and all applicable provisions of Washington law.

General

We are authorized to issue 400,000,000 shares of common stock, no par value, and 10,000,000 shares of preferred stock, no par value. As of the close of business on March 12, 2009 there were 321,832,619 shares of our common stock outstanding and warrants to purchase 1,543,433 shares of our common stock were outstanding. As of the close of business on March 12, 2009, we also had 100 shares of our Series A 3% convertible preferred stock outstanding, 1,000 shares of our Series D 7% convertible preferred stock outstanding and 6,702 shares of our Series F preferred stock outstanding.

Common Stock

Each holder of common stock is entitled to one vote for each share held on all matters to be voted upon by the shareholders and there are no cumulative voting rights. Subject to preferences that may be applicable to any outstanding preferred stock, holders of common stock are entitled to receive ratably the dividends, if any, that are declared from time to time by the board of directors out of funds legally available for that purpose. In the event of a liquidation, dissolution or winding up of the Company, the holders of common stock are entitled to share in our assets remaining after the payment of liabilities and the satisfaction of any liquidation preference granted to the holders of any outstanding shares of preferred stock. Holders of common stock have no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of common stock are fully paid and nonassessable. The rights, preferences and privileges of the holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate in the future.

General Description of Preferred Stock

The board of directors has the authority, without action by the shareholders, to designate and issue preferred stock in one or more series and to designate the rights, preferences and privileges of each series, which may be greater than the rights of the common stock. It is not possible to state the actual effect of the issuance of any shares of preferred stock upon the rights of holders of the common stock until the board of directors determines the specific rights of the holders of this preferred stock. However, the effects might include, among other things:

- restricting dividends on the common stock;
- diluting the voting power of the common stock;
- impairing the liquidation rights of the common stock;
- delaying or preventing a change in control of the Company without further action by the shareholders.

Anti-Takeover Effects of Provisions of Washington Law and our Charter and Bylaws

Washington law contains certain provisions that may have the effect of delaying, deterring or preventing a change in control of the Company. Chapter 23B.19 of the Washington Business Corporation Act prohibits us, with certain exceptions, from engaging in certain significant business transactions with an acquiring person (defined as a person or group of persons who acquire 10% or more of our voting securities without the prior approval of the our board of directors) for a period of five years following the acquiring person s share acquisition date. The prohibited transactions include, among others, a merger or consolidation with, disposition of assets to, or issuance or

Table of Contents

redemption of stock to or from, the acquiring person, or otherwise allowing the acquiring person to receive a disproportionate benefit as a shareholder. Exceptions to this statutory prohibition include approval of the transaction at a shareholders meeting by holders of not less than a two-thirds of the shares held by each voting group entitled to vote on the transaction, not counting shares as to which the acquiring person has beneficial ownership or voting control, transactions approved by the Board of Directors prior to the acquiring person first becoming an acquiring person, or, with respect to a merger, share exchange, consolidation, liquidation or distribution entered into with the acquiring person, transactions where certain other requirements regarding the fairness of the consideration to be received by the shareholders have been met. We may not exempt ourself from coverage of this statute. These statutory provisions may have the effect of delaying, deterring or preventing a change in control of the Company.

Our board of directors is divided into three approximately equal classes of directors serving staggered three-year terms. In addition, our amended and restated articles of incorporation provide that directors may be removed from office only at a meeting of the shareholders called expressly for that purpose and only for cause. Our amended and restated articles of incorporation limit cause to willful misfeasance having a material adverse effect on us or conviction of a felony, provided that any action by a director shall not constitute cause if, in good faith, the director believed the action to be in or not opposed to our best interests or if the director is entitled to be indemnified with respect to such action under applicable law, our amended and restated articles of incorporation or amended and restated bylaws, or a contract with us. Further, our amended and restated bylaws require a shareholder to provide notice to us of such shareholder s intention to nominate a person or persons for election as directors not later than 90 days prior to the first anniversary of the previous year s annual meeting or, in the case of an election to be held at a special meeting of the shareholders for the election of directors, the close of business on the tenth day following the date on which notice of such meeting is first given to shareholders. A shareholder must also provide us with notice of such shareholder s intent to make any proposal at an annual meeting of shareholders not later than 90 days prior to the first anniversary of the previous year s annual meeting of shareholders. These may have the effect of deterring hostile takeovers or delaying change in control of our management.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Investor Services, LLC.

DESCRIPTION OF WARRANTS ISSUED IN CONNECTION WITH THE ISSUANCE OF THE SERIES A 3% CONVERTIBLE PREFERRED STOCK

The material terms and provisions of the warrants being offered pursuant to this prospectus are summarized below. This summary is subject to, and qualified in its entirety by, the form of warrant filed as an exhibit to our current report on Form 8-K, which we filed with the SEC on February 12, 2007.

The warrants became exercisable on April 16, 2007 and will expire on April 16, 2009. The warrants are exercisable, at the option of each holder, upon the surrender of the warrants to us and the payment in cash of the exercise price of the shares being acquired upon exercise of the warrants.

The exercise price per share of common stock purchasable upon exercise of the warrants is $64.40 per share of common stock being purchased. The exercise price is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our common stock. The holders of the warrants are entitled to 20 days notice before the record date for certain distributions to holders of our common stock. If certain fundamental transactions occur, such as a merger, consolidation sale of substantially all of our assets, tender offer or exchange offer with respect to our common stock or reclassification of our common stock, the holders of the warrants will be entitled to receive thereafter in lieu of our common stock, the consideration (if different from common stock), that the holders of our common stock received due to such fundamental transaction. As of March 12, 2009, there were 17 holders of warrants outstanding to purchase 149,476 shares of common stock.

Table of Contents

DESCRIPTION OF WARRANTS ISSUED IN CONNECTION WITH THE ISSUANCE OF THE SERIES B

3% CONVERTIBLE PREFERRED STOCK

The material terms and provisions of the warrants being offered pursuant to this prospectus are summarized below. This summary is subject to, and qualified in its entirety by, the form of warrant filed as an exhibit to our current report on Form 8-K, which we filed with the SEC on April 16, 2007.

The warrants became exercisable on October 16, 2007 and will terminate on the second anniversary of that date. The warrants will be exercisable, at the option of each holder, upon the surrender of the warrants to us and the payment in cash of the exercise price of the shares being acquired upon exercise of the warrants.

The exercise price per share of common stock purchasable upon exercise of the warrants is $64.80 per share of common stock being purchased. The exercise price is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our common stock. The holders of the warrants are entitled to 20 days notice before the record date for certain distributions to holders of our common stock. If certain fundamental transactions occur, such as a merger, consolidation, sale of substantially all of our assets, tender offer or exchange offer with respect to our common stock or reclassification of our common stock, the holders of the warrants will be entitled to receive thereafter in lieu of our common stock, the consideration (if different from common stock), that the holders of our common stock received due to such fundamental transaction. As of March 12, 2009, there were 34 holders of warrants outstanding to purchase 276,373 shares of common stock.

Table of Contents

SELLING SECURITYHOLDERS

The following table sets forth the name of the selling securityholders which have provided us with information for this table, the number of securities beneficially owned by the selling securityholders as of March 12, 2009, and the total number of securities that may be offered pursuant to this prospectus. The table also provides information regarding the beneficial ownership of our securities by the selling securityholders as adjusted to reflect the assumed sale of all of the securities offered under this prospectus. Percentage of beneficial ownership is based on 321,832,619 shares of our common stock outstanding as of March 12, 2009. The selling securityholders may offer the securities for sale from time to time in whole or in part. Except where otherwise noted, the selling securityholders named in the following table have, to our knowledge, sole voting and investment power with respect to the securities which they beneficially own.

	Securities Beneficially Owned Prior to Offering					Beneficial Ownership After the Offering	
Beneficial Owner (1)	(A) Shares Underlying Warrants and Series D Convertible Preferred Stock	(B) Other Shares Beneficially Owned (2)	(C) (A+B) Total Shares Beneficially Owned	Percent (3)	(D) Number of Shares Being Registered	(C-D) Total Shares Owned (4)	Percent (3)
CD Investment Partners, Ltd (5)	57,415		57,415	*	57,415		*
Chestnut Ridge Partners, LP	25,000		25,000	*	25,000		*
Cranshire Capital, L.P. (6)	55,055		55,055	*	55,055		*
Enable Growth Partners LP	21,794		21,794	*	21,794		*
Enable Opportunity Partners LP	2,564		2,564	*	2,564		*
Evolution Master Fund Ltd SPC- Segregated Portfolio M	2		2	*	2		*
Firebird Global Master Fund II, Ltd	12,820	178,723	191,543	*	12,820	178,723	*
Firebird Global Master Fund, Ltd	22,389	228,084	250,473	*	22,389	228,084	*
GPC LIX, LLC	1,485	6,198	7,683	*	1,485	6,198	*
GPC LX, LLC (7)	3,737	35,229	38,966	*	3,737	35,229	*
Harvest Capital Enhanced LP	10,906		10,906	*	10,906		*
Harvest Capital LP	3,075		3,075	*	3,075		*
Harvest Institutional Partners LP	6,047		6,047	*	6,047		*
Hudson Bay Fund LP (8)	14,372		14,372	*	14,372		*
Hudson Bay Overseas Fund LTD (9)	17,630		17,630	*	17,630		*
Iroquois Master Fund Ltd. (10)	51,413		51,413	*	51,413		*
Midsummer Investment, Ltd.	51,282		51,282	*	51,282		*
Pandora Select Partners, LP	3,714	15,532	19,246	*	3,714	15,532	*
Pierce Diversified Strategy Master Fund LLC, Ena	1,282		1,282	*	1,282		*
Rockmore Investment Master Fund Ltd (11)	10,147	5,034,396	5,044,543	1.5%	10,147	5,034,396	1.5%
SCO Capital Partners, LLC	12,820	7,142,857	7,155,677	2.2%	12,820	7,142,857	2.2%
Truk International Fund (12)	16,645		16,645	*	16,645		*
Truk Opportunity Fund (13)	45,678		45,678	*	45,678		*
Whitebox Combined Partners, LP	14,197	62,767	76,964	*	14,197	62,767	*
Whitebox Convertible Arbitrage Partners LP	8,425	43,984	52,409	*	8,425	43,984	*
Whitebox Hedged High Yield Partners, LP	5,891	11,005	16,896	*	5,891	11,005	*
Wolverine Convertible Arbitrage Fund Trading LTD	41,106	389,878	393,981	*	41,106	389,878	*
All Other Selling Securityholders	397,843	TBD	TBD	TBD	397,843	TBD	TBD

* Less than one percent of the outstanding shares of common stock.

(1)

Additional selling securityholders not named in this prospectus will not be able to use this prospectus for resales until they are named in the selling securityholder table by prospectus supplement or post-effective amendment.

(2) Includes shares of common stock issuable upon conversion of the 5.75% Convertible Senior Notes due 2011, 7.5% Convertible Senior Notes due 2011, 9.0% Convertible Senior Notes due 2012, Series D 7% convertible preferred stock and Series F preferred stock. The Series F preferred stock becomes convertible on the later of April 1, 2009 or the day the Company s authorized number of shares of Common Stock is increased.

(3) Calculated based on Rule 13d-3(d)(1)(i) of the Exchange Act using 321,832,619 shares of common stock outstanding as of March 12, 2009. In calculating each respective holder s percentage, we did not assume the issuance of any other shares issuable upon exercise of outstanding warrants or options or conversion of any outstanding convertible notes except for those underlying the holder s own derivative securities.

(4) Assumes that all of the shares of common stock registered for resale hereunder have been sold by the selling securityholders.

(5) Carpe Diem Capital Management LLC (Carpe Diem Capital), as investment manager for CD Investment Partners, Ltd. (CDIP), ZPII, LP (ZPII), as the manager and sole member of Carpe Diem Capital, C3 Management Inc. (C3), as the general partner of ZPII, and John D. Ziegelman, as the Chairman of the Board, President and Treasurer and the beneficial owner of 100% of the outstanding shares of common stock of C3, each may be deemed to have beneficial ownership of the shares owned by CDIP which are being registered hereunder.

(6) Downsview Capital, Inc. (Downsview) is the general partner of Cranshire Capital, L.P. (Cranshire) and consequently has voting control and investment discretion over securities held by Cranshire. Mitchell P. Kopin (Mr. Kopin), President of Downsview, has voting control over Downsview. As a result of the foregoing, each of Mr. Kopin and Downsview may be deemed to have beneficial ownership (as determined under Section 13(d) of the Exchange Act) of the shares of common stock beneficially owned by Cranshire.

(7) GPC LX, LLC is a Delaware limited liability company. The limited liability company manager of GPC LX, LLC is Guggenheim Advisors, LLC (GA). The investment manager of GPC LX, LLC is Wolverine Asset

Table of Contents

Management, LLC (WAM). Christopher Gust is the portfolio manager that oversees the investment of the assets of GPC, LX, LLC on behalf of WAM. Each of GA, WAM and Mr. Gust disclaim beneficial ownership of the securities.

(8) Sander Gerber, Yoav Roth and Charles Winkler share voting and investment power over these securities. Each of Sander Gerber, Yoav Roth and Charles Winkler disclaim beneficial ownership over the securities held by Hudson Bay Fund LP. The selling stockholder acquired these securities offered for its own account in the ordinary course of business, and at the time it acquired the securities, it had no agreements, plans or understandings, directly or indirectly to distribute the securities.

(9) Sander Gerber, Yoav Roth and Charles Winkler share voting and investment power over these securities. Each of Sander Gerber, Yoav Roth and Charles Winkler disclaim beneficial ownership over the securities held by Hudson Bay Overseas Fund LTD. The selling stockholder acquired these securities offered for its own account in the ordinary course of business, and at the time it acquired the securities, it had no agreements, plans or understandings, directly or indirectly to distribute the securities.

(10) Joshua Silverman has voting and investing control over the shares held by Iroquois Master Fund Ltd. Mr. Silverman disclaims beneficial ownership of these shares.

(11) Rockmore Capital, LLC (Rockmore Capital) and Rockmore Partners, LLC (Rockmore Partners), each a limited liability company formed under the laws of the State of Delaware, serve as the investment manager and general partner, respectively, to Rockmore Investments (US) LP, a Delaware limited partnership, which invests all of its assets through Rockmore Investment Master Fund Ltd., an exempted company formed under the laws of Bermuda (Rockmore Master Fund). By reason of such dispositive power over the shares of our common stock owned by Rockmore Master Fund. Rockmore Capital and Rockmore Partners disclaim beneficial ownership of such shares of our common stock. Rockmore Partners has delegated authority to Rockmore Capital regarding the portfolio management decisions with respect to the shares of common stock owned by Rockmore Master fund and, as of February 10, 2009, Mr. Bruce T. Bernstein and Mr. Brian Daly, as officers of Rockmore Capital, are responsible for the portfolio management decisions of the shares of common stock owned by Rockmore Master Fund. By reason of such authority, Messrs. Bernstein and Daly may be deemed to share dispositive power over the shares of our common stock owned by Rockmore Master Fund. Messrs. Bernstein and Daly disclaim beneficial ownership of such shares of our common stock and neither of such persons has any legal right to maintain such authority. No other person has sole or shared voting or dispositive power with respect to the shares of our common stock as those terms are used for purposed under Regulation 13D-G of the Exchange Act. No person or group (as that term is used in Section 13(d) of the Exchange Act, or the SEC s Regulation 13D-G) controls Rockmore Master Fund.

(12) Michael E. Fein and Stephen E. Saltzstein, as principals of Atoll Asset Management, LLC, the Managing Member of Truk International Fund, LP, exercise investment and voting control over the shares of our common stock owned by Truk International Fund, LP. Both Mr. Fein and Mr. Saltzstein disclaim beneficial ownership of shares of our common stock owned by Truk International Fund, LP.

(13) Michael E. Fein and Stephen E. Saltzstein, as principals of Atoll Asset Management, LLC, the Managing Member of Truk Opportunity Fund, LLC, exercise investment and voting control over the shares of our common stock owned by Truk Opportunity Fund, LLC. Both Mr. Fein and Mr. Saltzstein disclaim beneficial ownership of shares of our common stock owned by Truk Opportunity Fund, LLC.

The identified selling securityholders provided us with information with respect to their securities ownership. Because the selling securityholders may sell all, part or none of their respective shares or other securities, we are unable to estimate the number of shares or other securities that will be held by the selling securityholders upon resale of the securities being offered by this prospectus. We have, therefore, assumed for the purposes of the registration statement related to this prospectus that the selling securityholders will sell all of their securities. See Plan of Distribution.

Table of Contents

PLAN OF DISTRIBUTION

The selling securityholders and any of their pledgees, assignees and successors-in-interest may, from time to time, sell any or all of the securities on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These sales may be at fixed or negotiated prices. The selling securityholders may use any one or more of the following methods when selling securities:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- settlement of short sales;
- broker-dealers may agree with the selling securityholder to sell a specified number of such securities at a stipulated price per security;
- a combination of any such methods of sale;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise; or
- any other method permitted pursuant to applicable law.

The selling securityholders may also sell securities under Rule 144 under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the selling securityholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling securityholders (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated. The selling securityholders do not expect these commissions and discounts relating to its sales of securities to exceed what is customary in the types of transactions involved.

In connection with the sale of our common stock or interests therein or other securities, the selling securityholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling securityholders may also sell shares of our common stock or other securities short and deliver these securities to close out its short positions, or loan or pledge the common stock or other securities to broker-dealers that in turn may sell these securities. The selling securityholders may also enter into option or other transactions with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares or other securities offered by this prospectus, which shares or other securities such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The selling securityholders and any broker-dealers or agents that are involved in selling the securities may be deemed to be underwriters within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by

Table of Contents

such broker-dealers or agents and any profit on the resale of the securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. The selling securityholders have informed us that they do not have any agreement or understanding, directly or indirectly, with any person to distribute the securities.

Because the selling securityholders may be deemed to be underwriters within the meaning of the Securities Act, they will be subject to the prospectus delivery requirements of the Securities Act. In addition, any securities covered by this prospectus which qualify for sale pursuant to Rule 144 under the Securities Act may be sold under Rule 144 rather than under this prospectus. The selling securityholders have advised us that they have not entered into any agreements, understandings or arrangements with any underwriter or broker-dealer regarding the sale of the resale securities. There is no underwriter or coordinating broker acting in connection with the proposed sale of the resale securities by the selling securityholders.

The securities will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the securities may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the resale shares may not simultaneously engage in market making activities with respect to our common stock for a period of two business days prior to the commencement of the distribution. In addition, the selling securityholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of shares of our common stock by the selling securityholders or any other person. We will make copies of this prospectus available to the selling securityholders and have informed the selling securityholders of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale.

We will not receive any proceeds from the sale of the securities by the selling securityholders. However, if a holder exercises a warrant in order to obtain underlying shares of common stock to sell, we would receive cash (if the exercise price is paid in cash.)

LEGAL MATTERS

Certain legal matters in connection with the offering will be passed upon for us by Orrick, Herrington & Sutcliffe LLP, San Francisco, California.

EXPERTS

Stonefield Josephson, Inc., an independent registered public accounting firm, has audited our consolidated financial statements and consolidated financial statement schedule at December 31, 2008, and for each of the three years in the period ended December 31, 2008, included in our Annual Report on Form 10-K for the year ended December 31, 2008, as set forth in its report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Such consolidated financial statements and consolidated financial statement schedule are incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the information requirements of the Exchange Act. In accordance with the Exchange Act, we file reports, proxy statements and other information with the SEC. Such reports, proxy statements and other information filed by us are available free of charge on our web site, http://www.celltherapeutics.com, and may be inspected and copied at the public reference facilities maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the public reference facilities by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site at http://www.sec.gov that contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC.

Table of Contents

Our common stock is listed on The NASDAQ Capital Market and such reports, proxy statements and other information concerning us may be inspected at the offices of The NASDAQ Stock Market, 1735 K Street, N.W., Washington, D.C. 20006.

DOCUMENTS INCORPORATED BY REFERENCE

SEC rules allow us to incorporate by reference into this prospectus the information we file with the SEC. This means that we can disclose important information by referring you to those documents. The information incorporated by reference is considered to be a part of this prospectus. We incorporate by reference the documents listed below:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2008;
- our definitive Proxy Statement on Schedule 14A, dated and filed with the SEC on January 14, 2009 for a Special Meeting of Shareholders, as amended by Amendment No. 1 to the definitive Proxy Statement on Schedule 14A, dated as of February 4, 2009 and filed with the SEC on February 5, 2009 and Definitive Additional Materials filed with the SEC on January 26, 2009, February 27, 2009 and March 9, 2009;
- our Current Reports on Form 8-K, and Amended Current Reports filed on Form 8-K/A, filed on January 3, 2008, January 14, 2008, January 18, 2008, January 29, 2008, February 5, 2008, February 19, 2008, March 5, 2008, March 11, 2008, March 21, 2008, April 4, 2008, April 18, 2008, April 30, 2008, May 2, 2008, June 13, 2008, June 20, 2008, June 24, 2008, July 25, 2008, July 30, 2008, August 6, 2008 and August 20, 2008, May 2, 2008, June 13, 2008, June 20, 2008, June 24, 2008, July 25, 2008, July 30, 2008, August 6, 2008, August 20, 2008, September 4, 2008, September 5, 2008, September 17, 2008, October 1, 2008, October 10, 2008, October 24, 2008, November 28, 2008, December 8, 2008, December 19, 2008, January 6, 2009, January 8, 2009, January 29, 2009, February 9, 2009, February 23, 2009, March 3, 2009 and March 16, 2009 (Items 1.01 and 2.01 only); and
- The description of our capital stock contained in our Registration Statements on Form 10 filed with the SEC on June 27, 1996 and June 28, 1996, including any amendment or reports filed for the purpose of updating that description.

In addition, we also incorporate by reference into this prospectus additional information that we may subsequently file with the Securities and Exchange Commission under Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act prior to the termination of the offering. These documents include Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as proxy statements.

Notwithstanding the foregoing, unless specifically stated to the contrary, none of the information that we disclose under Items 2.02 or 7.01 of any Current Report on Form 8-K that we may from time to time furnish to the Securities and Exchange Commission will be incorporated by reference into, or otherwise included in, this prospectus.

We are subject to the information and reporting requirements of the Exchange Act, and file periodic reports, proxy statements and we make available to our stockholders annual reports containing audited financial information for each year and quarterly reports for the first three quarters of each fiscal year containing unaudited interim financial information.

We will provide without charge to each person, including any beneficial owner of our indicated securities, to whom this prospectus is delivered, upon written or oral request, a copy of any and all of the documents that have been incorporated by reference in the prospectus but not delivered with this prospectus (without exhibits, unless the exhibits are specifically incorporated by reference but not delivered with this prospectus). Requests should be directed to:

Louis A. Bianco

Executive Vice President, Finance and Administration

Cell Therapeutics, Inc.

501 Elliott Avenue West, Suite 400

Seattle, Washington 98119

(206) 282-7100

Table of Contents

You should rely only on the information contained in this prospectus. We have not authorized any person to provide you with information different from that contained in this prospectus. This prospectus may be used only where it is legal to sell the indicated securities of Cell Therapeutics, Inc. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the date of delivery of this prospectus or of any sale of the indicated securities of Cell Therapeutics, Inc.

Table of Contents

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

The following table sets forth an estimate of the fees and expenses payable by the Registrant in connection with the registration of the securities offered hereby. All of such fees expenses, except for the Registration Fee, are estimated:

Securities and Exchange Commission registration fee	$ 1,710
Accounting fees and expenses	20,000
Legal fees and expenses	35,000
Miscellaneous	25,000
Total	$ 81,710

All expenses in connection with the issuance and distribution of the securities being offered shall be borne by the registrant, other than underwriting discounts and selling commissions, if any.

Item 15. Indemnification of Directors and Officers

Sections 23B.08.500 through 23B.08.600 of the Washington Business Corporation Act (the WBCA) authorize a court to award, or a corporation s board of directors to grant, indemnification to directors and officers on terms sufficiently broad to permit indemnification under certain circumstances for liabilities arising under the Securities Act of 1933. Article IX of the Registrant s Restated Bylaws provides for indemnification of the Registrant s directors, officers, employees and agents to the maximum extent permitted by Washington law. The directors and officers of the Registrant also may be indemnified against liability they may incur for serving in such capacity pursuant to a liability insurance policy we maintain for such purpose.

Section 23B.08.320 of the WBCA authorizes a corporation to limit a director s liability to the corporation or its shareholders for monetary damages for acts or omissions as a director, except in certain circumstances involving intentional misconduct, knowing violations of law or illegal corporate losses or distributions, or any transaction from which the director personally receives a benefit in money, property or services to which the director is not legally entitled. Article VI of the Registrant s Restated Articles of Incorporation contains provisions implementing, to the fullest extent permitted by Washington law, such limitations on a director s liability to the Registrant and its shareholders.

The Registrant has entered into an indemnification agreement with each of its executive officers and directors in which the Registrant agrees to hold harmless and indemnify the officer or director to the fullest extent permitted by Washington law. The Registrant agrees to hold harmless and indemnify the officer or director against any and all losses, claims, damages, liabilities or expenses incurred in connection with any actual, pending or threatened action, suit, claim or proceeding, whether civil, criminal, administrative or investigative and whether formal or informal, in which the officer or director is, was or becomes involved by reason of the fact that the officer or director is or was a director, officer, employee, trustee or agent of the Registrant or any related company, partnership or enterprise, including service with respect to an employee benefit plan, whether the basis of such proceeding is alleged action (or inaction) by the officer or director in an official capacity and any action, suit, claim or proceeding instructed by or at the direction of the officer or director unless such action, suit, claim or proceeding is or was authorized by the Registrant s Board of Directors. No indemnity pursuant to the indemnification agreements shall be provided by the Registrant on account of any suit in which a final, unappealable judgment is rendered against the officer or director for an accounting of profits made from the purchase or sale by the officer or director of securities of the Registrant in violation of the provisions of Section 16(b) of the Securities Exchange Act of 1934, and amendments thereto, or for damages that have been paid directly to the officer or director by an insurance carrier under a policy of directors and officers liability insurance maintained by the Registrant.

Table of Contents

Item 16. Exhibits and Financial Statement Schedules

(a) Exhibits

Exhibit Number	Description
4.1 (1)	Registrant s Amended and Restated Articles of Incorporation, as amended
4.2 (2)	Registrant s Amended and Restated Bylaws
4.3 (3)	Form of Warrant issued February 12, 2007 and February 14, 2007.
4.4 (4)	Form of Warrant issued April 16, 2007.
4.5 (5)	Form of Registration Rights Agreement between Cell Therapeutics and Certain Holders dated December 12, 2007.
4.6 (6)	Securities Purchase Agreement between Cell Therapeutics, Inc. and Purchasers dated February 8, 2007.
4.7 (7)	Securities Purchase Agreement between Cell Therapeutics, Inc. and Purchasers dated February 13, 2007.
4.8 (8)	Securities Purchase Agreement between Cell Therapeutics, Inc. and Purchasers dated April 11, 2007.
4.9 (9)	Securities Purchase Agreement between Cell Therapeutics, Inc. and Purchasers dated July 25, 2007.
4.10 (10)	Securities Purchase Agreement between Cell Therapeutics, Inc. and Purchasers dated November 29, 2007.
4.11 (11)	Securities Purchase Agreement between Cell Therapeutics, Inc. and Purchasers dated December 20, 2007.
5.1(*)	Opinion of Orrick, Herrington & Sutcliffe LLP.
12.1	Statement Re: Computation of Ratio of Earnings to Fixed Charges (included on page 26 of the Prospectus included herein).
23.1	Consent of Stonefield Josephson, Inc., Independent Registered Public Accounting Firm.
23.2(*)	Consent of Orrick, Herrington & Sutcliffe LLP.
24.1(**)	Power of Attorney.

* Previously filed as an exhibit to this Registration Statement.
** Previously filed in connection with this Registration Statement.
(1) Incorporated by reference to Exhibit 4.1 to the Registrant s Registration Statement on Form S-3 (No. 333-153358)
(2) Incorporated by reference to Exhibit 3.2 to the Registrant s Current Report on Form 8-K, filed on July 25, 2008.
(3) Incorporated by reference to Exhibit 4.2 to the Registrant s Current Report on Form 8-K, filed on February 12, 2007.
(4) Incorporated by reference to Exhibit 4.2 to the Registrant s Current Report on Form 8-K, filed on April 16, 2007.

Table of Contents

(5) Incorporated by reference to Exhibit 4.2 to the Registrant s Current Report on Form 8-K, filed on December 13, 2007.
(6) Incorporated by reference to Exhibit 10.1 to the Registrant s Current Report on Form 8-K, filed on February 12, 2007.
(7) Incorporated by reference to Exhibit 10.1 to the Registrant s Current Report on Form 8-K, filed on February 14, 2007.
(8) Incorporated by reference to Exhibit 10.1 to the Registrant s Current Report on Form 8-K, filed on April 16, 2007.
(9) Incorporated by reference to Exhibit 10.1 to the Registrant s Current Report on Form 8-K, filed on July 27, 2007.
(10) Incorporated by reference to Exhibit 10.1 to the Registrant s Current Report on Form 8-K, filed on December 3, 2007.
(11) Incorporated by reference to Exhibit 10.1 to the Registrant s Current Report on Form 8-K, filed on December 27, 2007.

Item 17. Undertakings

(a) The undersigned registrant hereby undertakes:

1. To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the Calculation of Registration Fee table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

2. That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

3. To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

4. That, for the purposes of determining liability under the Securities Act of 1933 to any purchaser:

(i) If the registrant is relying on Rule 430B:

(A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering

Table of Contents

made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant s annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan s annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act of 1933 and will be governed by the final adjudication of such issue.

Table of Contents

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of Seattle, state of Washington, on 16th of March, 2009.

CELL THERAPEUTICS, INC.

By: /s/ James A. Bianco

James A. Bianco, M.D.
Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed below by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
* **Phillip M. Nudelman, Ph.D.**	Chairman of the Board	March 16, 2009
/s/ James A. Bianco **James A. Bianco, M.D.**	Chief Executive Officer and Director (Principal Executive Officer)	March 16, 2009
* **Louis A. Bianco**	Executive Vice President, Finance and Administration (Principal Financial Officer and Principal Accounting Officer)	March 16, 2009
* **John H. Bauer**	Director	March 16, 2009

Table of Contents

Signature		Title	Date
* **Vartan Gregorian, Ph.D.**	Director		March 16, 2009
* **Richard L. Love**	Director		March 16, 2009
* **Mary O. Mundinger, Dr. PH**	Director		March 16, 2009
* **Jack W. Singer, M.D.**	Director		March 16, 2009
* **Frederick W. Telling, Ph.D.**	Director		March 16, 2009

*By: /s/ James A. Bianco
James A. Bianco
Attorney-in-Fact

Table of Contents

EXHIBIT INDEX

Exhibit Number	Description
4.1 (1)	Registrant s Amended and Restated Articles of Incorporation, as amended
4.2 (2)	Registrant s Amended and Restated Bylaws
4.3 (3)	Form of Warrant issued February 12, 2007 and February 14, 2007.
4.4 (4)	Form of Warrant issued April 16, 2007.
4.5 (5)	Form of Registration Rights Agreement between Cell Therapeutics and Certain Holders dated December 12, 2007.
4.6 (6)	Securities Purchase Agreement between Cell Therapeutics, Inc. and Purchasers dated February 8, 2007.
4.7 (7)	Securities Purchase Agreement between Cell Therapeutics, Inc. and Purchasers dated February 13, 2007.
4.8 (8)	Securities Purchase Agreement between Cell Therapeutics, Inc. and Purchasers dated April 11, 2007.
4.9 (9)	Securities Purchase Agreement between Cell Therapeutics, Inc. and Purchasers dated July 25, 2007.
4.10 (10)	Securities Purchase Agreement between Cell Therapeutics, Inc. and Purchasers dated November 29, 2007.
4.11 (11)	Securities Purchase Agreement between Cell Therapeutics, Inc. and Purchasers dated December 20, 2007.
5.1(*)	Opinion of Orrick, Herrington & Sutcliffe LLP.
12.1	Statement Re: Computation of Ratio of Earnings to Fixed Charges (included on page 26 of the Prospectus included herein).
23.1	Consent of Stonefield Josephson, Inc., Independent Registered Public Accounting Firm.
23.2(*)	Consent of Orrick, Herrington & Sutcliffe LLP.
24.1(**)	Power of Attorney.

* Previously filed as an exhibit to this Registration Statement.
** Previously filed in connection with this Registration Statement.
(1) Incorporated by reference to Exhibit 4.1 to the Registrant s Registration Statement on Form S-3 (No. 333-153358)
(2) Incorporated by reference to Exhibit 3.2 to the Registrant s Current Report on Form 8-K, filed on July 25, 2008.
(3) Incorporated by reference to Exhibit 4.2 to the Registrant s Current Report on Form 8-K, filed on February 12, 2007.
(4) Incorporated by reference to Exhibit 4.2 to the Registrant s Current Report on Form 8-K, filed on April 16, 2007.

Table of Contents

(5) Incorporated by reference to Exhibit 4.2 to the Registrant s Current Report on Form 8-K, filed on December 13, 2007.
(6) Incorporated by reference to Exhibit 10.1 to the Registrant s Current Report on Form 8-K, filed on February 12, 2007.
(7) Incorporated by reference to Exhibit 10.1 to the Registrant s Current Report on Form 8-K, filed on February 14, 2007.
(8) Incorporated by reference to Exhibit 10.1 to the Registrant s Current Report on Form 8-K, filed on April 16, 2007.
(9) Incorporated by reference to Exhibit 10.1 to the Registrant s Current Report on Form 8-K, filed on July 27, 2007.
(10) Incorporated by reference to Exhibit 10.1 to the Registrant s Current Report on Form 8-K, filed on December 3, 2007.
(11) Incorporated by reference to Exhibit 10.1 to the Registrant s Current Report on Form 8-K, filed on December 27, 2007.