

CELL THERAPEUTICS INC
Form 424B5
April 30, 2008
Table of Contents

Filed Pursuant to Rule 424(b)(5)
Registration Statement Nos. 333-143452 and 333-149982

PROSPECTUS SUPPLEMENT

(to Prospectus dated April 23, 2008)

CELL THERAPEUTICS, INC.

9,000 Shares of Series E 13.5% Convertible Preferred Stock

\$36,000,000 of 13.5% Convertible Senior Notes due April 30, 2014

We are offering 9,000 shares of our Series E 13.5% convertible preferred stock, \$36,000,000 in principal amount of our 13.5% convertible senior notes due April 30, 2014, and up to 56,962,025 shares of our common stock issuable on conversion of the offered Series E convertible preferred stock and the notes. We will also issue to the purchaser of the Series E preferred stock and the notes (a) warrants to purchase common stock and (b) warrants to purchase a unit consisting of convertible senior notes and additional warrants to purchase common stock, however, those warrants are not being registered pursuant to this prospectus supplement. We will sell our Series E convertible preferred stock, notes and warrants to a single institutional investor as a unit at the negotiated price of \$1.14 per share. Each share of our Series E convertible preferred stock is immediately convertible into approximately 1265.82 shares of our common stock. In addition, between May 30, 2008 and October 30, 2008, the holder of the Series E Preferred Stock will have a one-time right at such holder's option to convert all (but not less than all) of the originally issued Series E Preferred Stock into 13.5% convertible senior notes due April 30, 2014.

For a more detailed description of our Series E convertible preferred stock, see the section entitled "Description of Series E 13.5% Convertible Preferred Stock" beginning on page S-29. For a more detailed description of our common stock issuable upon the conversion or exercise of the Series E convertible preferred stock, see the section entitled "Description of Capital Stock" beginning on page 5 of the accompanying prospectus.

We will pay interest on the 13.5% convertible senior notes due April 30, 2014 on May 15 and November 15 of each year, commencing November 15, 2008.

The notes are convertible into shares of our common stock at any time upon the election of the holder. Each \$1,000 principal amount of the notes is initially convertible into 1266 shares of our common stock, which equates to an initial conversion price of approximately \$0.79 per share. In addition, the notes will be automatically converted into shares of our common stock if our common stock trades for 20 days within any 30 day trading period after April 30, 2009 at a price equal to or greater than \$1.58 per share. In the event that the notes are converted or voluntarily redeemed by the holder at any time prior to maturity, we will pay to the holder of the converted notes an amount equal to the total interest that would accrue on the notes from the issue date through April 30, 2014, less any interest payments made with respect to the converted notes.

The investor will have a one-time optional right to redeem the notes in May 2011, otherwise the notes will not be redeemable prior to their maturity. There will be no sinking fund for the notes. The notes will be unsecured.

The notes will be pari passu in right of payment with all our existing and future senior debt.

It is not anticipated that the Series E Preferred Stock, the notes or any of the warrants will be listed on a national securities exchange or automated inter-dealer quotation system. Our common stock is quoted on the Nasdaq Global Market and the MTA (formerly the MTAX) in Italy under the symbol "CTIC". On April 29, 2008, the last reported sale price of our common stock on the Nasdaq Global Market was \$0.79.

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

Rodman & Renshaw, LLC acted as the sole placement agent and book runner on this transaction. The placement agent is not purchasing or selling any of these securities nor is it required to sell any specific number or dollar amount of securities, but has agreed to use its best efforts to sell the securities offered by this prospectus supplement.

Investing in our convertible notes, convertible preferred stock and common stock involves a high degree of risk. See the section entitled Risk Factors beginning on page S-8 of this prospectus supplement.

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

	Shares of Convertible Preferred Stock	Per Share of Convertible Preferred Stock	Total
Public offering price of convertible note	N/A	N/A	\$ 36,000,000
Public offering price of convertible preferred stock	9,000	\$ 1,000	\$ 9,000,000
Placement agency fees			\$ 2,850,000
Total proceeds to us before other expenses			\$ 42,150,000

The convertible preferred stock and notes will be issued on or about April 30, 2008.

This prospectus supplement is dated April 30, 2008.

Table of Contents**TABLE OF CONTENTS****Prospectus Supplement**

	Page
<u>About This Prospectus</u>	S-ii
<u>Special Note Regarding Forward-Looking Statements</u>	S-ii
<u>Summary</u>	S-1
<u>Risk Factors</u>	S-9
<u>Use of Proceeds</u>	S-27
<u>Determination of Offering Price for Preferred Stock</u>	S-27
<u>Dividend Policy</u>	S-28
<u>Ratio of Earnings to Fixed Charges and Preferred Stock Dividends</u>	S-28
<u>Description of Series E 13.5% Convertible Preferred Stock</u>	S-29
<u>Description of Notes</u>	S-33
<u>Description of Warrants for Common Stock</u>	S-43
<u>Description of Warrants for Notes and Additional Warrants</u>	S-43
<u>Certain U.S. Federal Income Tax Considerations</u>	S-44
<u>Plan of Distribution</u>	S-49
<u>Legal Matters</u>	S-50
<u>Incorporation of Certain Information by Reference</u>	S-50

Prospectus

	Page
<u>About This Prospectus</u>	i
<u>Summary</u>	1
<u>Special Note Regarding Forward-Looking Statements</u>	7
<u>Risk Factors</u>	7
<u>Use of Proceeds</u>	22
<u>Description of Capital Stock</u>	23
<u>Description of Debt Securities</u>	25
<u>Description of Warrants</u>	30
<u>Legal Ownership of Securities</u>	33
<u>Plan of Distribution</u>	36
<u>Legal Matters</u>	38
<u>Experts</u>	38
<u>Where You Can Find More Information</u>	39

No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus supplement or related prospectus or to which we have referred you. You must not rely on any unauthorized information or representations. This prospectus supplement and related 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 supplement and related prospectus 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 supplement and related prospectus or any sale of a security.

Table of Contents

ABOUT THIS PROSPECTUS

This document is in two parts. The first part is this prospectus supplement, which describes the terms of this offering and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference into the accompanying prospectus. The second part is the accompanying prospectus, which gives more general information about the shares of our common stock and other securities we may offer from time to time under our shelf registration statement, some of which may not apply to the securities offered by this prospectus supplement. To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in the accompanying prospectus or any document incorporated by reference therein, on the other hand, the information in this prospectus supplement shall control.

You should rely only on the information contained or incorporated by reference in this prospectus supplement and contained or incorporated by reference in the accompanying prospectus. We have not authorized anyone, including the placement agent, and the placement agent has not authorized anyone, to provide you with different information. We are offering to sell, and seeking offers to buy, our securities only in jurisdictions where offers and sales are permitted. The information contained or incorporated by reference in this prospectus supplement and contained, or incorporated by reference in the accompanying prospectus is accurate only as of the respective dates thereof, regardless of the time of delivery of this prospectus supplement and the accompanying prospectus, or of any sale of our securities. It is important for you to read and consider all information contained in this prospectus supplement and the accompanying prospectus, including the documents incorporated by reference herein and therein, in making your investment decision. You should also read and consider the information in the documents we have referred you to in **Incorporation of Certain Information by Reference** in this prospectus supplement and **Where You Can Find More Information** in the accompanying prospectus.

Unless otherwise indicated, CTI, Company, we, us, our and similar terms refer to Cell Therapeutics, Inc. and its subsidiaries. CTI and X are our proprietary marks, we also own 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 supplement and the accompanying prospectus are the property of their respective owners.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

In addition to the other information contained or incorporated by reference in this prospectus supplement and accompanying prospectus, you should carefully consider the risk factors contained in and incorporated by reference into this prospectus supplement and accompanying prospectus when evaluating an investment in our securities. This prospectus supplement and accompanying prospectus and the documents incorporated by reference into this prospectus supplement and accompanying 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 benefit 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 authorizations required to enable such agreement will be obtained;

any projections of revenues or other financial items;

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

any statements concerning proposed new products or services;

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

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

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

S-ii

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 may, will, expects, plans, anticipates, estimates, potential, or continue or the negative thereof or other comparable terminology. There can be no assurance that such expectations or any of the forward-looking statements will prove to be correct, and actual results could differ materially from these projected or assumed in the forward-looking statements. Our future financial condition and results of operations, as well as any forward-looking statements, are subject to inherent risks and uncertainties, including, but not limited to, the risk factors set forth in this prospectus. 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.

S-iii

Table of Contents

SUMMARY

The following summary highlights information contained elsewhere, or incorporated by reference, in this prospectus supplement and the related prospectus. The following summary does not contain all the information that you should consider before investing in our common stock. To understand this offering fully, you should read this entire prospectus supplement and related prospectus carefully, including the financial statements and the documents that we have incorporated by reference into this prospectus.

Our Company

We develop, acquire and commercialize novel 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.

On December 21, 2007, we completed our acquisition of the U.S. development, sales and marketing rights to the radiopharmaceutical product Zevalin® (Ibritumomab Tiuxetan), or Zevalin, from Biogen Idec Inc., or Biogen, pursuant to an Asset Purchase Agreement. Zevalin was the first radioimmunotherapy approved by the U.S. Food and Drug Administration, or FDA. It was approved in 2002 to treat patients with relapsed or refractory low-grade, follicular, or B-cell non-Hodgkin's lymphoma, or NHL. The assets acquired included the Zevalin FDA registration, FDA dossier, U.S. trademark, trade name and trade dress, customer list, certain patents and the assignment of numerous contracts. Additionally, we entered into a seventy-eight month supply agreement with Biogen to manufacture Zevalin for sale in the United States as well as a security agreement providing Biogen a first priority security interest in the assets purchased in the transaction. We made an upfront payment to Biogen of \$10.1 million at the time of closing and are also responsible for up to \$20 million in contingent milestone payments based on positive trial outcomes and FDA approval for label expansion. We are also obligated to make additional royalty payments based on net sales of Zevalin.

On July 31, 2007, we completed our acquisition of Systems Medicine, Inc., or SM, a privately held oncology company, in a stock for stock merger valued at \$20 million. SM 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. Under the agreement, SM became Systems Medicine LLC and operates as a wholly owned subsidiary of CTI. SM 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 200 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. SM also has a strategic affiliation with the Translational Genomics Research Institute, or TGen, and has 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.

We are developing paclitaxel poliglumex, which we have previously referred to as XYOTAX, for the treatment of non-small cell lung cancer, or NSCLC, and ovarian cancer. Based on feedback related to our European marketing application submission, we intend to rebrand XYOTAX and therefore now refer to it by its generic name, paclitaxel poliglumex. As announced in March and May 2005, our STELLAR 2, 3 and 4 phase III clinical studies for paclitaxel poliglumex did not meet their primary endpoints of superior overall survival. However, we believe that the reduction in toxicities coupled with superior convenience and less medical resource utilization 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 patients with PS2 NSCLC. On March 4, 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

Table of Contents

Advice Working Party, or SAWP; the EMEA agreed that switching the primary endpoint from superiority to noninferiority 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 are also developing paclitaxel poliglumex for women with pre-menopausal levels of estrogen who have advanced NSCLC with normal or poor performance status. The basis for this clinical study was in part related to a pooled analysis of STELLAR 3 and 4 phase III trials for treatment of first-line NSCLC patients who have PS2, which we believe demonstrates a statistically significant survival advantage among women receiving paclitaxel poliglumex 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 paclitaxel poliglumex 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 paclitaxel poliglumex as first-line monotherapy in PS2 women with NSCLC. In December 2006, we agreed with the recommendation of the Data Safety Monitoring Board to close the PIONEER lung cancer clinical trial 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 trials, known as PGT306 and PGT307, focus exclusively on NSCLC in women with pre-menopausal estrogen levels, the subset of patients where paclitaxel poliglumex demonstrated the greatest potential survival advantage in the STELLAR trials. 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. 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 paclitaxel poliglumex 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 a new drug application, or 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 GOG212 trial of paclitaxel poliglumex for first-line maintenance therapy in ovarian cancer are reported.

We are also developing paclitaxel poliglumex 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 is under the control of the Gynecologic Oncology Group and is expected to enroll 1,100 patients by 2010. A potential interim analysis, based on the number of events in the database, is planned for 2009, and if successful could lead to an NDA filing in 2010.

We are developing pixantrone, a novel anthracycline derivative, for the treatment of NHL. An interim analysis of our ongoing phase III study of pixantrone, known as the EXTEND or PIX301 study, was performed by the independent Data Monitoring Committee in the third quarter of 2006. Based on their review, the study continued. In September 2007, we announced that we reduced the enrollment target and decided to conduct a full analysis of the EXTEND trial, instead of an interim analysis as previously planned. In March 2008, we completed enrollment of approximately 140 patients in the EXTEND trial, 97 of which are currently evaluable according to Histological Intent to Treat, or HITT, criteria. An analysis of the data is expected in the second half of 2008 and, if final study results are adequate, we could submit an NDA with the FDA in early 2009 with potential approval in the second half of 2009. The FDA agreed that randomized safety data from the RAPID study (CHOP-R vs. CPOP-R) could be used to support the EXTEND results in an NDA submission for pixantrone. The RAPID, or PIX203, study is a phase II study in which pixantrone is substituted for doxorubicin in the CHOP-R regimen compared to the standard CHOP-R regimen in patients with previously untreated diffuse large B-cell lymphoma. An interim analysis of the RAPID study was reported in July 2007. The interim analysis of the study 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 reductions in the incidence of severe heart damage, infections, and thrombocytopenia (a reduction in platelets in the blood) as well as significant reduction in febrile neutropenia. Three deaths occurred in the pixantrone arm versus none in the control arm. Based on subsequent follow-up, we believe this discrepancy is probably due to the early nature of the data. 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.

Table of Contents

We also 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 the Company's 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 brostallicin, which is a small molecule, anti-cancer drug with a novel, unique mechanism of action and composition of matter patent coverage, through our wholly owned subsidiary, SM. Data in more than 200 patients treated with brostallicin in phase I/II clinical trials reveal evidence of activity in patients with refractory cancer and patient/physician-friendly dosage and administration. A phase II study of brostallicin in relapsed/refractory soft tissue sarcoma met its pre-defined 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. Additionally, we initiated a phase II myxoid liposarcoma trial in 2007. Brostallicin also has demonstrated synergy with new targeted agents as well as established treatments in preclinical trials; consequently, we have begun a multi-arm combination study with brostallicin and other agents, including Avastin. This study is being conducted in conjunction with U.S. Oncology at multiple sites in the United States with the first combinations expected to be completed in 2008.

We are developing Zevalin for additional indications. Zevalin is a form of cancer therapy called radioimmunotherapy and is indicated for the treatment of patients with relapsed or refractory low-grade, follicular, or B-cell NHL, including patients with Rituximab-refractory follicular NHL. It was approved by the FDA in February 2002 as the first radioimmunotherapeutic agent for the treatment of NHL. At the American Society of Hematology meeting in December 2007, Bayer Schering, which holds the rights to Zevalin outside of the United States, published the results of their Phase III first-line indolent trial of Zevalin, known as the FIT trial. In March 2008, Bayer Schering received a positive opinion from the European Committee for Medicinal Products for Human Use, or CHMP, recommending Zevalin as consolidation therapy after remission induction in previously untreated patients with follicular lymphoma in Europe. Upon a favorable review by the European Commission, Bayer Schering could receive marketing authorization for this indication of Zevalin later this year. While we do not currently have any rights to use or access the data from the FIT trial, we are negotiating with Bayer Schering for access to those results. If we are successful in obtaining access to the FIT trial results and the data is suitable for FDA filing, we plan to submit a supplemental biologics license application, or sBLA, for Zevalin consolidation of first remission in advanced stage follicular lymphoma in the second half of 2008. We also intend to file an sBLA to remove the requirement for a biodistribution scan from the Zevalin label in 2008.

We are currently focusing our efforts on Zevalin, paclitaxel poliglumex, pixantrone, and brostallicin, and have no immediate plans to conduct any further clinical studies on CT-2106, polyglutamate camptothecin, or any other early-stage drug candidates.

CTI and XYOTAX are our proprietary marks, and we also own the U.S. rights to the mark Zevalin. All other product names, trademarks and trade names referred to in this prospectus are the property of their respective owners.

As of December 31, 2007, we had incurred aggregate net losses of approximately \$1.1 billion since inception. We expect to continue to incur additional operating losses for at least the next couple of years.

Recent Developments

Debt Restructuring

We have a substantial amount of debt outstanding, and our annual interest expense with respect to our debt is significant. We recently completed partial restructurings of our 2008 convertible notes in December 2007 and February 2008, which retired a portion of such debt, extended the maturity date on certain such debt to 2011 and

Table of Contents

involved the issuance of additional shares of common stock to holders of the exchanged notes. However, approximately \$10.7 million of such 2008 convertible notes remaining outstanding and are due on June 15, 2008. We expect to continue to review alternatives to restructure our remaining outstanding 2008 convertible notes.

On January 30, 2008, we announced a plan to refocus our resources on late-stage and marketed products, which involve increasing sales of Zevalin in the United States and preparing the marketing applications for paclitaxel poliglumex and pixantrone described above, while advancing the clinical development of brostallicin. This plan is intended to reduce operating expenses throughout the company by approximately 35% and reduce the company's projected net cash operating expenses to a forecasted \$77 million in 2008. As part of these refocusing efforts, approximately 30 of our U.S. employees were terminated.

As of December 31, 2007 we had cash and cash equivalents, securities available-for-sale and interest receivable of approximately \$18.4 million, and total current liabilities of \$53.5 million. We currently forecast net cash operating expenses of approximately \$77 million in 2008. As a result, we will need to continue to raise additional capital to fund our operations in 2008 and beyond. See Risk Factors.

Recent Financings

In January 2008, we sold 800,000 shares of our common stock to Société Générale under the Step-Up Equity Financing Agreement we have in place with Société Générale. The 800,000 shares of common stock were sold at a price of \$1.07, or approximately \$1.59, per share, which raised \$1,272,000 (\$856,000) in aggregate gross proceeds. In March 2008, we sold \$51,655,000 in 9% Convertible Senior Notes due March 4, 2012; of the \$51,655,000 in gross proceeds, approximately \$16.2 million was used to make payments to holders of our preferred stock to induce them to convert their shares of preferred stock into common stock and an additional \$13.9 million was placed in an escrow account to be used to make interest payments and make-whole payments on those notes for 12 months following the closing of that offering.

Recent Legal Proceedings

Based on language (the "Disputed Language") contained in the Articles of Amendment to the Company's Articles of Incorporation (the "Amendments") filed in connection with the issuance of the Company's Series A, Series B and Series C Convertible Preferred Stock (the "Preferred Stock"), certain holders thereof (the "Shareholders") asserted a right to consent (or not) to the transactions contemplated by the Exchange Agreements entered into by the Company and certain holders of its then existing convertible debt on December 12, 2007 (the "Exchange"). The Company is of the view that inclusion of the Disputed Language in the Amendments constitutes a scrivener's error without legal force or effect, and filed Articles of Correction with the Secretary of State of Washington in accordance with Section 23B.01.240 of the Revised Code of Washington. On January 2, 2008, Tang Capital Partners LP ("Tang") filed a civil action in the United States District Court for the Southern District of New York in which Tang alleged that the Company breached a Securities Purchase Agreement, executed on or about April 16, 2007, and executed in connection with the issuance of Series B Preferred Stock. Tang alleges that the Company's filing of Articles of Correction to the Articles of Amendment to the Amended and Restated Articles of Incorporation on or around December 11, 2007, materially and adversely altered the powers, preferences or rights conferred through its Securities Purchase Agreement, thereby constituting a Triggering Event, and as a result, Tang is entitled to redemption of its Preferred Stock in consideration for 130% of its Stated Value, plus other available relief, if any. Another holder of Preferred Stock, Enable Capital Management LLC ("Enable"), filed a lawsuit on January 23, 2008 in the Supreme Court of the State of New York with similar claims to the Tang action. On March 21, 2008, Enable filed an amended complaint, asserting an additional claim against CTI for breach of contract and breach of the covenant of good faith and fair dealing. Enable alleges that on or about March 4, 2008, CTI committed a further breach of its obligations by offering and/or paying consideration to certain holders of CTI preferred stock to induce those holders to convert their preferred stock into common stock without making the same offer to Enable. Additional holders of our preferred stock may assert claims similar to those asserted by Tang and Enable. CTI disputes each of the claims asserted against it and intends to defend itself vigorously. At this time, we are not able to make a determination whether the likelihood of an unfavorable outcome is probable or remote.

Table of Contents

Other Information

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. Our website can be found at www.celltherapeutics.com. Information contained in, or accessible through, our website does not constitute a part of this prospectus supplement.

S-5

Table of Contents

The Offering

The following is a brief summary of some of the terms of the offering and is qualified in its entirety by reference to the more detailed information appearing elsewhere in this prospectus supplement and the accompanying prospectus. For a more complete description of the terms of our convertible preferred stock, see the Description of Series E 13.5% Convertible Preferred Stock section in this prospectus supplement. For a more complete description of the notes, see the Description of Notes section in this prospectus supplement. For a more complete description of our common stock, see the Description of Capital Stock section in the accompanying prospectus.

Securities we are offering

Preferred Stock

9,000 shares of convertible preferred stock and up to 11,392,405 shares of common stock issuable upon conversion of the preferred stock. We will sell our convertible preferred stock and warrants in this offering at a negotiated price of \$1,000 per share of convertible preferred stock. In connection with the purchase of the convertible preferred stock in this offering, the purchaser will receive (a) a warrant to purchase an aggregate of approximately 5,696,202 shares of common stock at an exercise price of \$0.95 per share, which is equal to 120% of the closing bid price and (b) a warrant to purchase a unit consisting of convertible senior notes plus additional warrants to purchase common stock. The warrants are not being registered at this time.

Notes

\$36,000,000 aggregate principal amount of 13.5% convertible senior notes. In connection with the purchase of the notes in this offering, the purchaser will receive (a) a warrant to purchase an aggregate of approximately 22,784,810 shares of common stock at an exercise price of \$0.95 per share and (b) a warrant to purchase units consisting of convertible senior notes plus additional warrants to purchase common stock. The warrants are not being registered at this time.

Description of Series E 13.5% convertible preferred stock

Dividends

Dividends will be cumulative and will accrue daily from the date of closing of this offering, which is expected to be April 30, 2008, at the annual rate of 13.5% of the stated value of the convertible preferred stock, payable semi-annually on each May 1 and November 1 commencing November 1, 2008. The initial stated value of the preferred stock is \$1,000 per share. Any dividends must be declared by our board of directors and will be paid in shares of registered common stock valued at the volume weighted average price of our common stock for the five trading days preceding the dividend payment date. The amount of the stated value of the stock shall be increased by the amount of any unpaid dividend or late fees. Dividends on the convertible preferred stock will accrue regardless of whether or not earned or declared and regardless of whether or not we have profits, surplus or shares or other funds legally available for the payment of dividends.

Optional Conversion

The convertible preferred stock can be converted at your option at any time into shares of our common stock at a conversion price determined by dividing the stated value of the convertible preferred stock to be converted into the conversion price, which is initially \$0.79. The initial conversion price is subject to adjustment in certain events, including a non stock fundamental change or a common stock fundamental change, which are explained in more detail under the section entitled Description of Series E 13.5% Convertible Preferred

Stock Conversion Conversion Price Adjustment Fundamental
Transaction.

S-6

Table of Contents

Limitations on Conversion

We cannot effect a conversion of your convertible preferred stock and you may not request a conversion of your convertible preferred stock if such conversion would result in you and your affiliates owning more than 9.99% of our outstanding common stock after conversion.

Exchange Right

After May 20, 2008 until October 30, 2008, the purchaser will have a one-time option to convert all (but not less than all) of the originally issued Series E Preferred Stock for an aggregate principal amount of our 13.5% convertible senior notes due 2014 equal to the sum of the initial stated value of the Series E Preferred Stock plus all accrued but unpaid dividends on the Series E Preferred Stock. If the Series E Preferred Stock is so converted, the issuance date of such notes will be deemed to be the date the Series E Preferred Stock was exchanged for the notes to avoid double-counting interest payments on the notes and dividends on the Series E Preferred Stock.

Liquidation Preference

In the event of our voluntary or involuntary dissolution, liquidation or winding up, you will be entitled to be paid a liquidation preference equal to the stated value of your convertible preferred stock, plus accrued and unpaid dividends and any other payments that may be due on such shares, before any distribution of assets may be made to holders of capital stock ranking junior to the convertible preferred stock but after any prior liquidation rights of the holders of the Series A Preferred Stock, the holders of the Series B Preferred Stock, the holders of the Series C Preferred Stock and the holders of Series D Preferred Stock.

Redemption on the Occurrence of Certain Events

At any time after the occurrence of certain triggering events, as defined in the section entitled Description of Series E 13.5% Convertible Preferred Stock Redemption Redemption on Triggering Event below, the holders of the convertible preferred stock will be entitled to require redemption of all shares of convertible preferred stock then held by such holder for a redemption amount equal to the greater of (a) 100% of the stated value or (b) the product of (1) the volume weighted average price of the common stock on the trading day prior to the conversion multiplied by (2) the stated value divided by the conversion price; plus all accrued but unpaid dividends or other payments due on such shares.

Voting Rights

The Series E 13.5% convertible preferred stock will vote on an as-converted basis with the common stock, the Series A 3% convertible preferred stock, the Series B 3% convertible preferred stock and Series D 7% convertible preferred stock, all of which vote on an as-converted basis, and the Series C 3% convertible preferred stock, which has approximately 0.86 votes per share of common stock into which the Series C 3% convertible preferred stock is convertible. However, we cannot alter or adversely change the rights of the convertible preferred stock, authorize or create any class of senior or parity preferred stock, amend our articles of incorporation or other charter documents in such a way that it would adversely affect the rights of the convertible preferred stock, or increase the number of authorized shares of the convertible preferred stock without the approval of holders of a majority of the convertible preferred stock. In addition, you may have the right to vote as a separate class on certain corporate actions under Washington law.

Table of Contents

Description of Notes

Maturity	The principal of the notes will be due and payable on April 30, 2014.
Interest Rate and Payment Dates	13.5% per annum, payable May 15 and November 15 of each year, commencing November 15, 2008.
Ranking of Notes	The notes will be pari passu in right of payment with all our existing and future senior debt.
Voluntary Conversion of Notes	The notes are convertible into shares of our common stock at any time upon the election of the holder. Each \$1,000 principal amount of the notes is initially convertible into 1266 shares of common stock. The conversion ratio is subject to adjustments upon the occurrence of certain specified corporate events.
Automatic Conversion of Notes	After April 30, 2009, the notes will be automatically converted into shares of our common stock if our common stock trades for 20 days within any 30 day trading period at a price equal to or greater than \$1.58 per share.
Limitations on Conversion	We cannot effect a conversion of your notes, whether voluntary or automatic, and you may not request a conversion of your notes if such conversion would result in you and your affiliates owning more than 9.99% of our outstanding common stock after conversion.
Make Whole Payment	In the event that the notes are converted at any time prior to April 30, 2014, we will pay to the holder of the converted notes an amount equal to \$810 per \$1,000 principal amount of notes converted, less any interest payments made with respect to the converted notes.
Escrow	An amount of the proceeds of the offering equal to the aggregate Make-Whole Payment (\$36,455,696) will be deposited with U.S. Bank National Association as paying agent to be held for a period of 12 months from closing. Amounts in the escrow account will be released to pay Make-Whole Payments with respect to notes converted during the escrow period. At the end of 12 months, the amount remaining in the escrow account will be released to the Company.
Redemption of Notes	The holder of the notes will have a one-time optional right to redeem the notes in May 2011. The Company cannot force prepayment of the notes prior to maturity.
Use of proceeds after expenses	We intend to use the proceeds for general corporate purposes including, without limitation, research and development, preclinical and clinical trials, the preparation and filing of new drug applications and general working capital. See Use of Proceeds in this prospectus supplement.
Market for the convertible preferred stock and notes	There is no established public trading market for the offered convertible preferred stock or notes, and we do not expect a market to develop. In addition, we do not intend to apply for listing the convertible preferred stock or notes on any securities exchange.

Table of Contents

RISK FACTORS

You should carefully consider the risks described below and other information in this prospectus supplement and in the documents incorporated by reference into this prospectus supplement before deciding to invest in our common stock. 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 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, 2007, we had an accumulated deficit of approximately \$1.1 billion. We are pursuing regulatory approval for paclitaxel poliglumex, pixantrone and brostallicin and plan to seek regulatory approval for the expansion of approved uses of Zevalin. 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. We have a single drug we are marketing, Zevalin, and the net proceeds of sales of this drug are not sufficient to pay our debt and operating expenses on a current basis. We do not currently project that net revenues from sales of any of our products will be sufficient to cover our existing debt and operating expenses within the next twelve months. Unless we raise substantial additional capital, we will not be able to repay this debt or the interest, liquidated damages or other payments that may become due with respect to our debt. Approximately \$10.7 million of this debt is due in June 2008. Prior to this debt becoming due, we may engage in one or more restructuring transactions which could involve, among other things, an effective increase in interest rates, alteration of terms or exchanges involving the issuance of additional shares of common stock or other arrangements which may dilute or be adverse to the value of our common stock and preferred stock.

We need to raise additional funds immediately 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.

In 2007, we were able to raise capital through the sale of preferred stock and common stock, and raised a total of \$91.0 million in gross proceeds, with an additional \$1.3 million in gross proceeds raised from an equity offering under our Step-Up Equity Financing Agreement with Société Générale in January 2008 and approximately \$35.5 million in proceeds from a convertible debt offering, net of inducement payments for conversions of convertible preferred stock, in March 2008. In addition, approximately \$13.9 million of this amount is restricted and is being held in escrow to fund potential make-whole payments due upon conversions of this debt. However, we have substantial operating expenses associated with the development of our product candidates and as of December 31, 2007 we had cash and cash equivalents, securities available-for-sale and interest receivable of approximately \$18.4 million, and total current liabilities of approximately \$53.5 million. We also have a substantial amount of debt outstanding, including an aggregate of approximately \$152.5 million in convertible notes as of April 28, 2008, prior to the issuance of any debt in this transaction, of which \$10.7 million is due in June 2008. Furthermore, as a result of our preferred stock financings in 2007, we may be obligated to redeem such preferred stock starting in February 2009. We expect that our existing cash and cash equivalents, securities available-for-sale and interest receivable, including proceeds received from our offerings through April 28, 2008, will not provide sufficient working capital to fund our presently anticipated operations for the next 12 months and repay our notes due in June 2008, and we will therefore need to raise additional capital.

Table of Contents

We may raise such additional capital through public or private equity financings, partnerships, joint ventures, dispositions of assets, debt financings or restructurings, bank borrowings or other sources. We have a \$60 million Step-Up Equity Financing Agreement with Société Générale which we may be able to use to provide additional equity financing if we meet certain conditions under that Financing Agreement. As of April 28, 2008, we have drawn down approximately \$0.9 million under the Financing Agreement. However, additional funding, including any obtained under the Financing Agreement, 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 paclitaxel, poliglumex, pixantrone, brostallicin, expanded uses of Zevalin and other products we may be developing. 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. 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.

We have received a going concern opinion 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 report on our December 31, 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 may be unable to obtain a quorum for meetings of our shareholders and therefore be unable to take certain corporate actions.

Our bylaws require that a quorum, consisting of a majority 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. A substantial number 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, 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 will 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 the Company's articles of incorporation to increase authorized shares that are to be used for general corporate purposes, and the ratification of our auditors, in the event that the broker receives no voting instruction from the beneficial owner. As a result of this custody transfer, we were able to hold a special meeting of the shareholders in April 2007, an annual meeting of the shareholders in September 2007 and another special meeting of the shareholders in January 2008. However, obtaining a quorum at future meetings depends 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 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. 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 the Company. 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, such failure could have a materially adverse effect on the Company.

Table of Contents

We could fail in financing efforts 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 the securities 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.

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 the Commissione Nazionale per le Società e la Borsa, or 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. 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 year. We filed our initial listing prospectus with CONSOB in April 2007 and worked 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. We continue to pursue the possibility of publishing a listing prospectus to cover other financing efforts under Italian law, however, at the present time we have not been successful in getting approval from the Italian regulators for such a 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.

In 2006, we identified material weaknesses in our internal control over financial reporting and we received an adverse opinion on internal control over financial reporting from our independent registered public accounting firm in connection with their annual internal control attestation process for fiscal year 2006.

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 the company's 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 the following material weaknesses relative to the effectiveness of our internal control over financial reporting:

We did not maintain an effective review and approval process in our European subsidiary, or CTI (Europe), to ensure the accuracy of accounts payable and accrued expenses for certain activities shared by headquarters and CTI (Europe) in conformity with generally accepted accounting principles.

Table of Contents

We did not maintain effective internal controls related to the financial reporting process to detect errors that are not identified by the process level controls in CTI (Europe).

During 2007, to remedy the material weaknesses in our internal control over financial reporting, we implemented enhanced review and approval procedures that are designed to help ensure we accurately record accounts payable and accrued expense balances in CTI (Europe), and trained personnel in key finance positions in CTI (Europe) regarding the enhanced procedures and appropriate levels of oversight and review.

In November 2007, we merged CTI (Europe) with and into CTI in a roll-up merger under Washington law. As a result, all of our operations in Italy are now directly part of CTI and CTI (Europe) is now a branch of the Company.

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.

If we are not able to successfully identify and complete valuable acquisition opportunities, we may not achieve the anticipated growth we would otherwise achieve were such acquisitions accomplished.

We have in the past and may in the future seek to further expand our product portfolio through acquisitions of other complementary businesses or technologies or marketed products. For example, in July 2007, we acquired SM, a privately held oncology company, and gained worldwide rights to brostallicin, a DNA minor groove binding agent with proven anti-tumor activity which is currently in phase II clinical studies. Additionally, in December 2007, we acquired Zevalin from Biogen Idec, or Biogen, for development, marketing and sale in the United States. Mergers and acquisitions are inherently risky, and we cannot assure that we will be able to complete future acquisitions, or that our acquisitions will be successful. The successful execution of our acquisition strategy will depend, in part, on our ability to identify, negotiate, complete and integrate such acquisitions and, if necessary, obtain satisfactory debt or equity financing to fund those acquisitions. Failure to manage and successfully integrate acquired businesses could harm our business.

If we are not able to successfully integrate recent and future acquisitions, our management's attention could be diverted, and efforts to integrate future acquisitions could consume significant resources.

The acquisitions of SM and of Zevalin, or any other future acquisition that we may undertake, involve numerous risks related to the integration of the acquired asset or entity into the Company after the acquisition is completed. These risks include the following:

difficulties in integrating the operations, technologies and products of the acquired companies;

difficulties in implementing internal controls over financial reporting;

diversion of management's attention from normal daily operations of the business;

inability to maintain the key business relationships and the reputations of acquired businesses;

entry into markets in which we have limited or no prior experience and in which competitors have stronger market positions;

dependence on unfamiliar affiliates and partners;

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

reduction in the development or commercialization of existing products due to increased focus on the development or commercialization of the acquired products;

S-12

Table of Contents

responsibility for the liabilities of acquired businesses;

inability to maintain our internal standards, controls, procedures and policies at the acquired companies or businesses; and

potential loss of key employees of the acquired companies.

In addition, if we finance or otherwise complete acquisitions by issuing equity or convertible debt securities, our existing shareholders may be diluted.

If we are unable to expand label usage of Zevalin, or maintain or obtain improved reimbursement rates, we may not recognize the full value of the asset and there may be adverse effects on our expected financial and operating results.

We intend to seek expansion of the approved uses, or labeled uses, of Zevalin in the United States. However, we may be unable to obtain approval for such label expansion in full or in part. If we are not able to obtain approval for expansion of the labeled uses for Zevalin, or if we are otherwise unable to fulfill our marketing, sales and distribution plans for Zevalin, we may not recognize the full anticipated value of Zevalin. If we do not expand the approved uses of Zevalin, we may have insufficient net revenues to finance our current levels of debt and operations unless we are able to market and sell other products. While we are negotiating with Bayer Schering for access to data from their first line indolent trial, or FIT trial, we currently have no rights to that data, and there is no assurance that Bayer Schering will agree to give us access to their data on reasonable terms or at all. In addition, even if we are able to use the data from Bayer Schering's FIT trial, there can be no guarantee that such data will be adequate or suitable for submission to the FDA in support of a supplemental biologics license application for additional approved uses of Zevalin, or that the FDA will approve such supplemental biologics license application.

In 2007, the Centers for Medicare and Medicaid Services, or CMS, implemented new outpatient reimbursement rates to be put in place in 2008 for radiopharmaceuticals, including Zevalin. These new rates are below the acquisition costs of Zevalin. Although Congress passed legislation in late 2007 to delay the implementation of those new rates and stabilize reimbursement rates for the first six months of 2008 with the intention of giving drug manufacturers and CMS more time to reach an agreement that more adequately reflects hospitals' costs associated with the therapy, there can be no guarantee that CMS will agree to a rate or methodology that provides an acceptable reimbursement on radiopharmaceuticals such as Zevalin. In the event that CMS does not agree to a reimbursement rate that is adequate to cover the acquisition costs of Zevalin, we may face immediate and significant difficulty in getting care providers to use Zevalin, which would have an adverse impact on our expected financial and operating results.

We may face difficulties in achieving broader market acceptance of Zevalin if we do not invest significantly in our sales and marketing infrastructure.

We currently market Zevalin using a direct sales force that we recently hired in connection with our acquisition of Zevalin from Biogen. U.S. sales of Zevalin by its prior owner either declined or remained flat over the past several years and we expect such sales to remain flat in 2008. We believe that our sales and marketing strategy, in conjunction with our efforts to obtain approval by the FDA for expanded uses of Zevalin, will increase sales of and revenue from Zevalin over the next few years. Our sales and marketing strategy intends to take advantage of the recent lowering of barriers to adoption, including greater economic incentives and practice efficiencies for Zevalin compared to rituximab, the recent adoption of positron emission tomography in community oncology practices, which facilitates use of Zevalin, and implementation of a Zevalin community access program, which targets facilitation of on-site ordering, receipt, and administration of Zevalin by the 100 largest community oncology group practices. However, implementation of the sales and marketing strategy will require an investment of resources and may not increase Zevalin revenues according to our forecasts. In addition, creation and expansion of an effective sales force may take time, and competition for sales and marketing personnel in our industry is intense. Therefore, we will need to effectively manage and expand our sales force, hire individuals with additional technical expertise, expand our distribution capacity or otherwise grow our sales and marketing infrastructure in order to achieve broader market acceptance and additional sales revenue from Zevalin. In addition to the factors just listed, if we do not effectively manage our sales force, our financial condition and operating results may suffer.

Table of Contents

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 paclitaxel poliglumex and pixantrone with Novartis International Pharmaceutical Ltd., or Novartis, pursuant to which Novartis received an exclusive worldwide license for the development and commercialization of paclitaxel poliglumex 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 elects to participate in the development and commercialization of paclitaxel poliglumex or if Novartis exercises its option related to pixantrone and we are able to reach a definitive agreement. 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. We may never receive the necessary regulatory approvals and our products may not reach the necessary sales levels.

We may be delayed, limited or precluded from obtaining regulatory approval of paclitaxel poliglumex 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, market or expand the marketing of 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 large part on obtaining regulatory approval of paclitaxel poliglumex. 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 paclitaxel poliglumex 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. We have decided not to initiate an additional study, the PGT306 trial, for which we have submitted a special protocol assessment, or SPA, to conserve limited financial resources. 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 paclitaxel poliglumex 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 paclitaxel poliglumex 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 paclitaxel poliglumex in the United States.

Based on discussions with the EMEA Scientific Advice Working Party, we submitted an MAA in Europe on March 4, 2008 based on results of the STELLAR trials, which 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 will be presented in the MAA.

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.

Table of Contents

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. With the exception of Zevalin, none of our current products have received approval. 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. 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.

Our marketed products, such as Zevalin, are and will be subject to extensive regulations regarding their promotion and commercialization. For instance, we are subject to numerous regulations and statutes regulating the manner of selling and obtaining reimbursement for our products that receive marketing approval. 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 our sales force is relatively new, 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, a commercially approved drug, we also entered into a corporate integrity agreement with the Department of Health and Human Services' Office of the Inspector General that requires us to establish a compliance committee and compliance program and adopt a formal code of conduct. The USAO settlement does not address separate claims brought against the Company by the private party plaintiff in this matter, which generally relate to attorney's fees and employment related claims. In 2007, the United States District Court dismissed the private party plaintiff's employment claims as barred by applicable statutes of limitation, and the private party plaintiff has advised us that he intends to seek a court order awarding approximately \$1 million in attorneys' fees. We are not able to reasonably estimate the potential cost of any award that may be made pursuant to this claim.

We rely on third parties for the manufacture and supply of Zevalin and for the manufacture and supply of radioactive isotopes used in the administration of Zevalin.

We currently rely on Biogen to manufacture and supply Zevalin to us through a long-term manufacturing agreement, and Biogen may, in turn, rely on other third-party manufacturers to fill its requirements for manufacturing Zevalin. If Biogen or any third party contract manufacturing organization, or CMO, or contract service provider, or CSP, upon which it relies does not produce or test and release Zevalin in sufficient quantities and on a timely and cost-effective basis, or if Biogen or any third party CMO or CSP does not obtain and maintain all required manufacturing approvals, our business could be harmed. In addition, we rely on MDS (Canada) for the manufacture and supply of Yttrium-90, a radioactive isotope used in the administration of Zevalin therapy. MDS (Canada) is currently our sole source of Yttrium-90, which must be manufactured and shipped in such a way as to ensure the appropriate potency of the isotope based on its radioactive half-life at the time of administration to the patient is valid. If MDS (Canada) were to have problems with the manufacture or supply of Yttrium-90, our business could be materially impacted, and we may not be able to find an additional supplier of the isotope on

Table of Contents

acceptable terms or at all. We also rely on Malinckrodt and GE for the manufacture and supply of Indium-111, a radioactive isotope used in the administration of Zevalin diagnostic for clinical purposes. Malinckrodt and GE are currently our two qualified sources of Indium-111, which must be manufactured and shipped in such a way as to ensure the appropriate potency of the isotope based on its radioactive half-life at the time of administration of the diagnostic dose to the patient. If both companies were to have problems with the manufacture or supply of Indium-111, our business could be materially impacted, and we may not be able to find an additional supplier of the isotope on acceptable terms or at all.

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:

Zevalin currently competes with Bexxar®, which is marketed by GlaxoSmithKline, and any rituximab-containing chemotherapy regimen. Rituximab is marketed in the U.S. by Genentech and Biogen Idec. In addition, other companies such as Cephalon, Eli Lilly, Genta, Genmab, Favril, and Genitope are developing products which could compete with Zevalin.

If we are successful in bringing paclitaxel poliglumex to market, we will face direct competition from oncology-focused multinational corporations. Paclitaxel poliglumex 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 and OSI Pharmaceuticals, which markets Tarceva; Genentech, which markets Avastin; Eli Lilly, which markets 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 paclitaxel poliglumex.

Because pixantrone is intended to provide less toxic treatment to patients who have failed standard chemotherapy treatment, if pixantrone is brought 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 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,

Table of Contents

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. As discussed above, CMS proposed new rates for 2008 for Zevalin that, if implemented, would result in reimbursement rates below our acquisition cost of Zevalin. 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, with the exception of Zevalin, currently are in research or development and have not received marketing approval.

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

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

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.

S-17

Table of Contents

The intellectual property and assets related to Zevalin are subject to a security agreement with Biogen; if we were to default on certain payments or reimbursement owed to Biogen or certain third parties, those assets would be subject to foreclosure by Biogen and we could lose our ability to continue development, sales and marketing activities with respect to Zevalin.

On December 21, 2007, in connection with our purchase of Zevalin, we entered into a Security Agreement with Biogen granting a first priority security interest to Biogen in all of our right, title and interest (a) in and to the assets related to Zevalin that we purchased from Biogen, together with any other assets or rights related to any of such assets or otherwise used in the development, manufacture or commercialization of Zevalin, and (b) under certain license, sublicense and supply agreements entered into in connection with our purchase of Zevalin. In the event we were to default on certain of our obligations under the Security Agreement, the Asset Purchase Agreement pursuant to which we continue to owe royalties and milestone payments to Biogen, or the related sublicense and service agreements, or in the event we were to make an application for, or consent to, the appointment of a receiver, trustee or liquidator of all or a substantial portion of our assets, transfer our assets as part of a general assignment or other arrangement for the benefit of creditors, become insolvent, file a voluntary or involuntary petition under the provisions of the United States Bankruptcy Code, or in the event of an attachment or execution upon, or seizure of, all or substantially all of our assets, Biogen may take any action with respect to the collateral under the Security Agreement that it deems necessary or advisable to accomplish the purposes of the Security Agreement. The Security Agreement will remain in effect until all obligations secured by that agreement have been satisfied. If Biogen were to foreclose on the collateral under this Security Agreement, it would have a material adverse impact on our business.

If any of our license agreements for intellectual property underlying Zevalin, paclitaxel poliglumex, pixantrone, brostallicin, or any other products are terminated, we may lose our rights to develop or market that product.

We have licensed intellectual property, including patent applications relating to intellectual property for pixantrone, brostallicin and Zevalin. We have also in-licensed the intellectual property for our drug delivery technology relating to paclitaxel poliglumex that 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 agreements, 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, paclitaxel poliglumex 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, licenses and patent

Table of Contents

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 but have not conducted an exhaustive search 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. We may not be able to successfully challenge the validity of these patents and could have 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 the raw materials necessary to produce our paclitaxel poliglumex 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 paclitaxel poliglumex, 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 a single source on a purchase order basis. 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 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.

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 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, paclitaxel poliglumex, has a complex manufacturing process, 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 finished products for

Table of Contents

pixantrone and brostallicin are both manufactured by a single vendor. The drug substance for Zevalin is produced under contract by Biogen and the drug product and finished product is manufactured and distributed at a contract manufacturer and contract distribution facility.

If we do not successfully develop additional 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. Our ability to generate significant revenues from Zevalin is dependent in part on our ability to find new markets for the product, including through gaining wider acceptance and use of the drug by physicians and through FDA approval of expanded uses for the product. There is no guarantee that we will be successful in accomplishing either of these goals. Paclitaxel poliglumex, pixantrone, brostallicin and label expansions for Zevalin are currently in clinical trials and may not be successful. For example, our STELLAR phase III clinical trials for paclitaxel poliglumex for the treatment of non-small cell lung cancer failed to meet their primary endpoints. 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 this and 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 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. Substantially all of our product candidates in clinical development are in-licensed from a third party, including Zevalin, paclitaxel poliglumex, pixantrone 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.

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. On March 4, 2008, we submitted an MAA to the EMEA for paclitaxel poliglumex, however, we do not expect a regulatory decision on an MAA prior to the second half of 2009. Analysis of the data from our EXTEND trial is expected in the second half of 2008 and, if final study results are adequate, we could submit an NDA with the FDA in early 2009 with potential approval in the second half of 2009.

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 not be completed successfully within any specified time period by us, or without significant additional resources or expertise to those

Table of Contents

originally expected to be necessary. Many drugs in human clinical trials fail to demonstrate the desired safety and efficacy characteristics. Clinical testing may not show potential products to be safe and efficacious and potential products may not be approved for a specific indication. Further, 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. Data obtained from clinical trials are susceptible to varying interpretations. Government regulators and our collaborators may not agree with our interpretation of our clinical trial results. In addition, 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. 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 or complete, need to perform more or larger clinical trials than planned or experience delays in any of our present or planned clinical trials, 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 paclitaxel poliglumex 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.

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;

S-21

Table of Contents

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 novel 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 may not develop into commercial products.

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 based 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;

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.

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

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.

S-22

Table of Contents

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, marketing and sale of human pharmaceutical products, and we may not be able to avoid significant product liability exposure. While we have insurance covering marketing and sales of Zevalin as well as 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 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 Zevalin or any products we develop. A successful product liability claim in excess of our insurance coverage could exceed our net worth.

Adverse events related to our products can negatively impact our product sales and results from operations.

Our commercial product, Zevalin, has the possibility of causing significant side effects in patients, and deaths associated with an infusion reaction symptom complex, though rare, have occurred within 24 hours of infusions of rituximab, a component of Zevalin. In addition, Yttrium-90 Zevalin administration often results in severe and prolonged cytopenias in most patients, while severe cutaneous and mucocutaneous reactions have also been reported. While side effects are common in oncology drugs, adverse events such as these could negatively impact sales of Zevalin, which in turn could negatively impact our results from operations.

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 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.

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

As a result of 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, a portion of our consolidated financial obligations will arise in euros. In addition, 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

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 April 28, 2008, our stock price, has ranged from a low of \$0.47 to a high of \$5.68. 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 2008 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;

changes in health care policies and practices;

economic and other external factors; and

general market conditions.

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 CTI and certain directors and officers of CTI and a derivative action lawsuit was filed against CTI's 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,

Our common stock is listed on the Nasdaq Global Market and we may not be able to maintain that listing, which may make it more difficult for investors to sell shares of our common stock.

Our common stock is listed on the Nasdaq Global Market. The Nasdaq Global Market has several quantitative and qualitative requirements companies must comply with to maintain this listing, including a \$1.00 minimum bid price per share and \$50 million minimum value of listed securities. On April 16, 2008, we received notice from the Nasdaq Stock Market that our common stock had a closing bid price below \$1.00 for at least 30 consecutive business days and therefore we are not in compliance with the listing standards of the Nasdaq Global Market. Under the current Nasdaq Global Market rules, we have a period of 180 days from the date of notice, or until October 13, 2008, to attain compliance by again meeting the \$1.00 minimum bid price for a minimum of 10 consecutive

Table of Contents

business days. If we are unable to meet that compliance criteria before October 13, 2008, we may have the option to transfer to the Nasdaq Capital Market, assuming we meet all other initial listing qualifications for the Nasdaq Capital Market, where we can receive an additional 180 days to regain compliance. If we are ultimately unable to attain compliance with the minimum bid price we may be delisted. In addition, if we fail to maintain the minimum value of listed securities, we may have to transfer to the Nasdaq Capital Market or may be delisted. The level of trading activity of our common stock may decline if it is no longer listed on the Nasdaq Global Market or Nasdaq Capital Market. Furthermore, our failure to maintain a listing on the Nasdaq market may constitute an event of default under certain of our indebtedness which would accelerate the maturity date of such date. As such, if our common stock ceases to be listed for trading on the Nasdaq Global Market or Nasdaq Capital Market for any reason, it may harm our stock price, increase the volatility of our stock price and make it more difficult for investors to sell shares of our common stock.

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.

Risks Related to this Offering

There is no public market for the notes or Series E Preferred Stock to be issued in this offering.

There is no established public trading market for the notes or for the Series E Preferred Stock being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply for listing the notes on any securities exchange or for quotation on the Nasdaq Global Market. Without an active market, the liquidity of the notes and the preferred stock will be limited.

Since we have broad discretion in how we use the proceeds from this offering, we may use the proceeds in ways in which you disagree.

We intend to use the net proceeds for general corporate purposes. With the exception of the proceeds that we will deposit in the escrow account for future interest and Make-Whole Payments on the notes, we have not allocated specific amounts of the net proceeds from this offering for any specific purpose. Accordingly, our management will have significant flexibility in applying the net proceeds of this offering. You will be relying on the judgment of our management with regard to the use of these net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. It is possible that the net proceeds will be invested in a way that does not yield a favorable, or any, return for our company. The failure of our management to use such funds effectively could have a

material adverse effect on our business, financial condition, operating results and cash flow.

S-25

Table of Contents

Purchasers of the notes and convertible preferred stock who convert their notes or shares into common stock will incur immediate dilution.

If you convert your notes or shares of convertible preferred stock into shares of common stock, you will experience immediate and substantial dilution because the per share conversion price of your shares of convertible preferred stock and notes will be higher than the net tangible book value per share of the outstanding common stock immediately after this offering. In addition, you will experience dilution when we issue additional shares of common stock that we are permitted or required to issue under options, warrants, our stock option plan or other employee or director compensations plans.

If we automatically convert the notes, you should be aware that there is a substantial risk of fluctuation in the price of our common stock from the date we elect to automatically convert to the conversion date.

We may elect to automatically convert the notes if the volume weighted average price of the company's common stock exceeds \$1.58 for each of 20 consecutive trading days. You should be aware that there is a risk of fluctuation in the price of our common stock between the time when we may first elect to automatically convert the preferred and the automatic conversion date.

Automatic conversion will affect your rights and preferences without any action by you.

We may elect to automatically convert the convertible preferred stock without any action taken by you, subject to the beneficial ownership limitation on conversion, and we may do so at a time when you do not think it is prudent to convert your convertible preferred stock. Upon conversion, you will lose all preferences to which the convertible preferred stock is entitled, including your liquidation preference and your dividend preference. Moreover, because you will then own common stock, your ownership interest in the company will be diluted.

Holders of our convertible preferred stock or notes will have no rights as a common stockholder until they acquire our common stock.

Until you acquire shares of our common stock upon conversion of the offered convertible preferred stock or notes, you will have no rights with respect to our common stock, including rights to respond to tender offers and rights to receive any dividends or other distributions on our common stock, except that the holders of the convertible preferred stock will have the right to vote with the common stock on an as-converted basis. Upon conversion of the convertible preferred stock or notes, you will be entitled to exercise the rights of a common stockholder only as to matters for which the record date occurs after the conversion date, however, in the case of conversion of the convertible preferred stock you will still be entitled to vote on matters for which the record date occurs before the conversion date by virtue of the voting rights of the convertible preferred stock.

Table of Contents

USE OF PROCEEDS

We estimate that the net proceeds of this offering, after deducting fees and expenses, will be approximately \$61.4 million.

We will deposit \$36,455,696 into an escrow account to be used to make interest payments and make-whole payments on the notes for 12 months following closing currently intend to use the remainder of the net proceeds from this offering to retire the remaining balance of our 2008 senior and junior convertible notes due in June 2008 of approximately \$10.8 million, to acquire access to Bayer-Schering's Phase III FIT trial data for potential use in submitting an SBLA for label expansion of Zeralin in the United States, and for working capital and general corporate purposes, which may include, among other things, paying interest on our outstanding indebtedness, paying dividends on our preferred stock, funding research and development, preclinical and clinical trials, the preparation and filing of new drug applications, commercial operations, including sales and marketing associated with Zevalin, and general working capital. We expect our net cash used in operating activities in 2008 will be approximately \$77 million. This statement reflects our current views about future events and is subject to significant risks and uncertainties, including those described below, those described more fully in other reports filed by us with the SEC and those described in the section entitled "Risk Factors" in this prospectus supplement. Because this statement reflects our current expectations concerning future events, our actual results could differ materially.

Except as set forth above, we cannot estimate precisely the allocation of the net proceeds from this offering among these uses. The amounts and timing of the expenditures may vary significantly, depending on numerous factors, including the progress of our clinical trials and other development efforts as well as the amount of cash used in our operations. Accordingly, our management will have broad discretion in the application of the net proceeds of this offering. We reserve the right to change the use of proceeds as a result of certain contingencies such as competitive developments, opportunities to acquire technologies or products and other factors. Pending the uses described above, we may temporarily invest the net proceeds of this offering in short- and medium-term interest-bearing obligations, investment-grade instruments, certificates of deposit or direct or guaranteed obligations of the U.S. government.

DETERMINATION OF OFFERING PRICE FOR PREFERRED STOCK

We will sell our convertible preferred stock in this offering at a negotiated price of \$1,000 per share of convertible preferred stock. The purchaser of our convertible preferred stock will receive, for each share of convertible preferred stock it purchases in the offering, (a) a warrant to purchase approximately 526 shares of common stock at an exercise price of \$0.95 per share and (b) a warrant to purchase units consisting of convertible senior notes plus additional warrants for common stock. The warrants are not being registered on this prospectus supplement. Prior to this offering, there was no public market for the convertible preferred stock, the notes or either of the warrants. The terms and conditions of the convertible preferred stock, including the dividend rate and the conversion price, the notes, including interest and make-whole payments, and the warrants, including exercise price, were determined by negotiation by us and the purchaser. The principal factors considered in determining these terms and conditions include:

the market price of our common stock;

the information set forth in this prospectus supplement and accompanying prospectus and otherwise available to the placement agent;

our history and prospects and the history of, and prospects for, the industry in which we compete;

our past and present financial performance and an assessment of our management;

our prospects for future earnings and the present state of our development;

the general condition of the securities markets at the time of this offering;

the recent market prices of, and demand for, publicly traded common stock of generally comparable companies; and

other factors deemed relevant by the placement agent and us.

S-27

Table of Contents**DIVIDEND POLICY**

We currently intend to pay cash dividends on our prior existing series of convertible preferred stock and intend to pay dividends on the Series E Preferred Stock in shares of our registered common stock. Dividends on the convertible preferred stock are cumulative, meaning that if they are not paid they continue to accrue and must be paid prior to the payment of any dividends on our common stock. For a discussion of dividends payable on the Series E convertible preferred stock, please see [Description of Series E 13.5% Convertible Preferred Stock](#) [Dividends](#).

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, the Series B 3% Convertible Preferred Stock, the Series C 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.

RATIO OF EARNINGS TO FIXED CHARGES AND PREFERRED STOCK DIVIDENDS

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

	Year Ended December 31,				
	2003	2004	2005	2006	2007
	(dollars in thousands)				
Ratio of earnings to fixed charges and preferred stock dividends(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, 2003, 2004, 2005, 2006 and 2007 were insufficient to cover fixed charges by \$130,031, \$252,298, \$102,505, \$135,819 and \$148,305 (in thousands) respectively. For this reason, no ratios are provided for these periods.

Table of Contents

DESCRIPTION OF SERIES E 13.5% CONVERTIBLE PREFERRED STOCK

The material terms and provisions of the convertible preferred stock being offered pursuant to this prospectus supplement and the accompanying prospectus are summarized below. This summary is subject to, and qualified in its entirety by, the rights, preferences and privileges of the Series E convertible preferred stock set forth in the articles of amendment to our amended and restated articles of incorporation to be filed as an exhibit to our current report on Form 8-K which we will file with the SEC on or about May 2, 2008.

Rank

The convertible preferred stock will, with respect to dividend rights and rights upon our liquidation, dissolution or winding up, rank junior to our Series A 3% Convertible Preferred Stock, Series B 3% Convertible Preferred Stock, Series C 3% Convertible Preferred Stock and Series D 7% Convertible Preferred Stock, and senior to our common stock and the company may not redeem, purchase or otherwise acquire any common stock or other securities of the company junior to the convertible preferred stock except for repurchases of shares of common stock from employees, officers, directors, consultants or others who perform services for the company and who are subject to an agreement with the company providing a right of repurchase of such shares at cost or on the occurrence of certain events, such as termination of employment.

Dividends

Holders of the convertible preferred stock are entitled to receive cumulative dividends at a rate of 13.5% per annum of the stated value of the convertible preferred stock, to be paid in shares of our registered common stock semi-annually on each May 1 and November 1 with the first such payment to be made on November 1, 2008. The initial stated value of the convertible preferred stock is \$1,000 per share. Dividends will also be paid on the date any shares of the convertible preferred stock are converted into common stock with regard to such shares being converted and on the redemption date with regard to shares being redeemed under the optional redemption provisions of the company's articles of incorporation. The dividends shall start accruing on the date of the first issuance of the convertible preferred stock under this prospectus and will be calculated on the basis of a 360-day year, consisting of twelve 30-day periods, and will accrue daily from the date of the closing of this offering. The dividends will be deemed to accrue whether or not earned or declared and whether or not there are profits, surplus or authorized shares or other funds of the company legally available for the payment of dividends. If a dividend is not paid within three trading days following the date on which such dividend was to be paid, the dividend shall accrue a late fee, payable in cash, of 18% per annum from the date such payment was due through and including the date such payment is made. The amount of the stated value of the stock will be increased by the amount of any unpaid dividend or late fees.

In the event that any dividends due on the convertible preferred stock remain unpaid, the company may not redeem any stock that is junior to or on parity with the convertible preferred stock, nor may it set aside any funds or contribute to a sinking fund for such purpose.

Liquidation Preference

Upon the company's voluntary or involuntary dissolution, liquidation or winding up, holders of the convertible preferred stock will be entitled to receive, subject to any prior liquidation rights of the outstanding Series A 3% Convertible Preferred Stock, Series B 3% Convertible Preferred Stock, Series C 3% Convertible Preferred Stock and Series D 7% Convertible Preferred Stock, the stated value of such holder's shares of convertible preferred stock plus any accrued and unpaid dividends and other payments that may be due on the shares before the holders of common stock or any other junior securities of the company receive any payments from such liquidation. In the event the amount available for payment of this liquidation preference is less than the full amount of the stated value of all shares of convertible preferred stock then outstanding, the assets to be distributed to the holders of the convertible preferred stock will be ratably distributed among such holders in accordance with the respective amounts that would be payable on such holder's shares if the liquidation preference was paid in full.

Table of Contents

Conversion

Optional Conversion.

The convertible preferred stock shall be convertible at the option of the holders thereof into registered shares of the company's common stock at anytime after the closing of the transaction into the number of shares of common stock determined by dividing the aggregate stated value of the convertible preferred stock being converted by the conversion price then in effect. The initial conversion price is \$0.79 and is subject to adjustment as described below. This right to convert is limited by the beneficial ownership limitation described below.

Beneficial Ownership Limitation.

The company may not effect any conversion and the holder may not request conversion of the convertible preferred stock if following such conversion the holder and its affiliates would beneficially own in excess of 9.99% of the company's outstanding convertible preferred stock after giving effect to such conversion. The amount of beneficial ownership of the holder and its affiliates will be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations of that section, except that any convertible preferred stock not being converted will not be included in the calculation of the holder's beneficial ownership.

Conversion Price Adjustment.

Stock Dividends and Stock Splits. If the company pays a stock dividend or otherwise makes a distribution payable in shares of the common stock on the shares of the common stock or any common stock equivalents, subdivides or combines its outstanding common stock, or reclassifies its common stock in such a way that it issues additional shares of capital stock of the company, the conversion price will be adjusted by multiplying the then existing conversion rate by a fraction the numerator of which is the number of shares outstanding immediately before the distribution, dividend, adjustment or recapitalization and the denominator of which is the number of shares outstanding immediately after such action.

Rights Offerings. If the company issues rights, options or warrants to holders of the common stock giving such holders a right to subscribe for or purchase shares of common stock at a price per share lower than the volume weighted average price of the common stock on the record date for such issuance and does not offer the same rights to the holders of the convertible preferred stock, the conversion price will be adjusted to reflect the rights offering by multiplying such conversion price by a fraction the numerator of which is the number of shares outstanding before such record date plus the number of shares which the aggregate offering price (assuming full subscription) would purchase at the value weighted average price of the common stock on such record date and the denominator of which is the number of shares of common stock outstanding on the record date plus the aggregate number of shares offered for subscription or purchase.

Pro Rata Distributions. If the company distributes evidences of its indebtedness, assets (including cash or cash dividends), warrants or other rights to subscribe for its securities (other than common stock) to the holders of the common stock, then the conversion price will be adjusted by multiplying the conversion price in effect immediately prior to the record date for such distribution by a fraction the numerator of which is the volume weighted average price of the common stock on such record date minus the fair market value at such record date of the distributed evidence of indebtedness, asset, warrant or other right applicable to one share of common stock, such fair market value to be determined by the board in good faith, and the denominator of which is the volume weighted average price of the common stock on such record date.

Fundamental Transaction. If the company effects a fundamental transaction (as defined below), then upon any future conversion of the convertible preferred stock, the holders will have the right to receive, for each share of common stock they would have received upon such conversion, the same kind and amount of securities, cash or property as such holder would have been entitled to receive in the transaction had it been the holder of a share of common stock immediately prior to the transaction. The term fundamental transaction means any of the following:

a merger or consolidation of the company with or into another entity;

the sale of all or substantially all of the assets of the company in one transaction or a series of related transactions;

Table of Contents

any tender offer or exchange offer allowing holders of the common stock to tender or exchange their shares for cash, property or securities, regardless of who makes such offer; or

any reclassification of the common stock or any compulsory share exchange by which the common stock is effectively converted into or exchanged for other securities, cash or property.

If the holders of the common stock are given a choice as to the securities, cash or property to be received in a fundamental transaction, the holders of the convertible preferred stock will be given the same choice on conversion of such holder's shares.

Exchange Right

After May 30, 2008 but no later than October 30, 2008, the purchaser will have a one-time optional right to convert all (but not less than all) of the originally issued Series E Preferred Stock for an aggregate principal amount of our 13.5% convertible senior notes due 2014 equal to the sum of the initial stated value of the Series E Preferred Stock plus all accrued but unpaid dividends on the Series E Preferred Stock. The notes to be issued in such exchange will have the same maturity date as the notes being issued in this offering, however, to avoid double-counting the interest payable on the notes (including the make-whole payment amount) and the dividends on the preferred stock accrued and converted into the notes, the date of issuance of such notes will be deemed to be the date the Series E Preferred Stock is exchanged for the notes.

Redemption

Redemption on Triggering Event.

At any time after the occurrence of a triggering event, as defined below, the holders of the convertible preferred stock will be entitled to require redemption of all shares of convertible preferred stock then held by such holder for a redemption amount equal to the greater of (a) 100% of the stated value or (b) the product of (1) the volume weighted average price of the common stock on the trading day immediately preceding the conversion multiplied by (2) the stated value divided by the conversion price; plus all accrued but unpaid dividends or other payments due on such shares. The term triggering event means the occurrence of any of the following:

the company fails to provide an effective registration statement for the common stock issuable on conversion of the convertible preferred stock, subject to a grace period of 20 calendar days;

the company fails to deliver stock certificates for the common stock issued on a conversion of the convertible preferred stock before the fifth trading day after the certificates are required to be delivered;

the company fails to deliver the convertible notes issuable on exchange of the convertible preferred stock before the fifth trading day after the notes are required to be delivered;

the company provides notice to the holders or public notice that it does not intend to comply with requests for conversion of the convertible preferred stock or the exchange of the convertible preferred stock for notes;

the company fails to have available a sufficient number of authorized and unreserved shares of common stock for issuance on conversion of the convertible preferred stock;

the company fails to observe or perform a covenant, agreement or warranty contained in, or otherwise commits a breach, of the purchase agreement and related transaction documents under which the convertible preferred stock are being sold, and such failure or breach is not cured within 30 calendar days after the company receives notice of such failure or breach;

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

the company is a party to a change of control transaction which transfers control of greater than 33% of the legal or beneficial ownership of the company or which is a merger, consolidation, sale of assets or similar transaction following which the shareholders of the company immediately prior to the transaction own less than 66% of the aggregate voting power of the surviving or acquiring entity;

the company enters into voluntary or involuntary bankruptcy proceedings that are not dismissed within 60 days, is adjudicated bankrupt or insolvent, has a custodian appointed for any significant part of its assets, makes a general assignment for the benefit of creditors, calls a meeting of its creditors with a view to arranging a composition, adjustment or restructuring of its debts, or acts or fails to act in such a manner that it expressly indicates its consent to, approval of or acquiescence in any such proceedings; or

S-31

Table of Contents

the company's common stock is not listed or quoted for trading on the Nasdaq Global Market or Nasdaq Capital Market for more than 5 trading days, even if such days are not consecutive; or

Voting Rights

The convertible preferred stock shall have the right to the number of votes equal to the number of shares of common stock issuable upon conversion of the preferred stock, and shall vote with the common stock as a single class except where a separate class vote is required by law. However, the company cannot take any of the following actions without the approval of holders of a majority of the convertible preferred stock:

alter or adversely change the rights of the convertible preferred stock;

authorize or create any class of senior or parity preferred stock with respect to dividends, redemption or distribution of assets on liquidation;

amend the company's articles of incorporation or other charter documents in such a way that it would adversely affect the rights of the convertible preferred stock; or

increase the number of authorized shares of the convertible preferred stock without the approval of holders of a majority of the convertible preferred stock.

In addition, the company has agreed to not to take any of the following actions without the approval of 67% in stated value of the then outstanding shares of the convertible preferred stock:

amend the articles of incorporation, bylaws or other charter documents of the company so as to materially adversely affect the rights of any holder of the convertible preferred stock;

repay, repurchase or offer to repay or repurchase or otherwise acquire any of its common stock, common stock equivalents or securities junior to the convertible preferred stock except

- i transactions permitted by the purchase agreement and related agreements under which the convertible preferred stock is being sold; or
- i the repurchase of up to 1,000,000 shares of common stock in any 12-month period from employees, officers, directors, consultants or others performing services for the company or any of its subsidiaries under agreements approved by a majority of the board of directors or under which the company has the option to repurchase such shares at cost or at cost on the occurrence of certain events such as termination of employment;

pay cash dividends or distributions on any securities of the company junior to the convertible preferred stock; or

enter into any agreement or understanding to take any of the actions listed above.

Issuance of Additional Equity Securities; Retirement or Redemption of Outstanding Debt and Preferred Stock.

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

From the date of closing until June 15, 2008, we will not issue or agree to issue any equity security or other security exchangeable for, convertible into or otherwise enabling the holder thereof to acquire any of our equity securities (other than certain issuances including those relating to certain acquisitions and corporate partnering agreements), provided that we may enter into equity line of credit agreements prior to that date that may be used

S-32

Table of Contents

after July 15, 2008. In the event the Company completes a second closing of this offering for an additional \$5,000,000 in 13.5% convertible senior notes due 2014 by June 15, 2008, then we will extend the June 15, 2008 date to July 31, 2008. In addition, in the event the warrants for additional notes are fully exercised or the Company exercises its put right to compel a second closing, we have agreed not to issue any equity (other than certain issuances including those relating to certain acquisitions and corporate partnering agreements) for a period of five months from such exercise or second closing. We can exercise our put right to compel a second closing of the units to be issued on exercise of the Series B warrants (convertible senior notes and warrants to purchase shares of common stock) only if on the date we issue notice regarding such second closing, we have achieved all of the following: (a) successful reporting of PIX301 Phase III data or completion of a new BLA filing for Zevalin, (b) an average daily trading volume for the preceding 20 days of at least \$2 million per day on the Nasdaq stock market and the MTA combined, (c) maintain a registration statement permitting the resale of all common shares underlying the securities to be issued in the second closing, and (d) maintain a common stock trading price for 20 days within any 30 day trading period at a price equal or greater than \$0.87. We must exercise our put right within 75 days of achieving these conditions or such right will expire.

Additionally, for a period of three months following the closing of this offering, we will not repurchase, exchange, redeem or retire any of our existing notes or outstanding preferred stock, except that the convertible notes that mature June 15, 2008 can be paid at maturity or extended, provided that no equity issued to induce such extension which matures prior to June 15, 2008 can be publicly traded before the date that is five months after the closing of this offering.

Record Ownership

The purchaser of the Series E Preferred Stock has agreed to remain the record owner of such stock, or any underlying shares of common stock issued on conversion of the Series E Preferred Stock, through May 31, 2008.

DESCRIPTION OF THE NOTES

The material terms and provisions of the convertible notes being offered pursuant to this prospectus supplement and the accompanying prospectus are summarized below. This summary is subject to, and qualified in its entirety by, the terms of the notes as set forth in the indenture and form of note to be filed as exhibits to our current report on Form 8-K which we will file with the SEC on or about May 2, 2008.

The 13.5% convertible senior notes due April 30, 2014 will be senior debt securities as described in the accompanying prospectus. The following description of the particular terms of the notes offered hereby supplements and, to the extent inconsistent therewith, replaces the description of the general terms and provisions of the senior debt securities set forth in the accompanying prospectus. Capitalized terms used herein and not defined in this prospectus supplement shall have the meanings given to them in the accompanying prospectus or in the senior indenture referred to in this prospectus supplement.

General

We will issue the notes under the indenture, dated as of April 30, 2008, between the Company and U.S. Bank, National Association, as trustee. An officers' certificate will set forth the terms of the notes in accordance with the indenture. The notes will rank equally with all of our other unsecured and senior debt. See "Description of Debt Securities" in the accompanying prospectus for a description of the general terms and provisions of our senior debt securities, including the notes, issued under the indenture.

We may, without the consent of the holders of the notes, issue additional notes having the same ranking and the same interest rate, maturity and other terms (except for the public offering price and issue date) as the notes, provided that such additional notes do not have, for purposes of U.S. federal income taxation, a greater amount of original issue discount than the outstanding notes offered hereby have as of the date of the issue of such additional notes. Any of these additional notes, together with the notes offered hereby, will constitute a single series of notes under the indenture. No additional notes may be issued if an event of default has occurred with respect to the notes.

We will issue the notes only in registered form, in denominations of \$1,000 and integral multiples thereof. We will pay principal and interest at the corporate trust office of the trustee in New York, New York or at such other office or agency that we will maintain for such purpose in New York, New York. At our option, we may pay interest by check mailed to the person entitled to payment at that person's address appearing on the register of the notes.

Table of Contents

The notes will not be redeemable by us prior to maturity, however, the holder shall have a one-time option, in May 2011, to redeem the notes. The notes will not be subject to any sinking fund, however, in the event we issue secured indebtedness, other than liens or encumbrances in connection with biopharmaceutical licensing or partnering arrangements, that is junior to or pari passu with the notes in a principal amount in excess of \$10 million while these notes are outstanding, the notes being issued in this offering must be equally and ratably secured with such future indebtedness. We may not issue or indebtedness that is structurally senior to these notes so long as these notes remain outstanding.

The notes will initially be limited to a total principal amount of \$36,000,000, and will mature on April 30, 2014.

The notes will bear interest from April 30, 2008 or from the most recent date to which we have paid or provided for interest, at the annual rate of 13.5%. We will pay interest semiannually on the notes on each May 15 and November 15, beginning on November 15, 2008, to the person in whose name the notes are registered at the close of business on May 1 or November 1 prior to the payment date.

We will compute interest on the notes on the basis of a 360-day year consisting of twelve 30-day months. If an interest payment date or the maturity date falls on a day that is not a business day, the payment will be made on the next business day as if it were made on the date the payment was due, and no interest will accrue on the amount so payable for the period from and after that interest payment date or the maturity date, as the case may be, to the date the payment is made.

Form, Denomination, Transfer, Exchange and Book-Entry Procedures

The notes are issued:

only in fully registered form;

without interest coupons; and

in denominations of \$1,000 and integral multiples thereof.

Principal of, premium, if any, and interest (and liquidated damages, as defined below, if any) on the notes is payable, and the notes may be presented for registration or exchange, at the office or agency we maintain for such purpose in the Borough of Manhattan, The City of New York. Until we designate otherwise, our office or agency is the trustee's corporate trust office presently located in the Borough of Manhattan, The City of New York.

The notes are currently evidenced by one or more global notes that are deposited with the trustee as custodian for DTC and registered in the name of Cede & Co., as nominee of DTC. Except as set forth below, record ownership of the global note may be transferred, in whole or in part, only to another nominee of DTC or to a successor of DTC or its nominee.

The global note is not registered in the name of any person, nor can it be exchanged for notes that are registered in the name of any person, other than DTC or its nominee, unless either of the following occurs:

DTC has notified us that it is unwilling or unable to continue as depository for the global note or has ceased to be a clearing agency registered as such under the Exchange Act or announces an intention permanently to cease business or does in fact do so;
or

an event of default with respect to the notes represented by the global note has occurred and is continuing.

In those circumstances, DTC will determine in whose names any notes issued in exchange for the global note will be registered.

So long as the notes are registered in the name of Cede & Co. as nominee for DTC, DTC or its nominee are considered the sole owner and holder of the global note for all purposes, and as a result:

you cannot receive notes registered in such holder's name if they are represented by the global notes;

S-34

Table of Contents

you cannot receive certificated (physical) notes in exchange for your beneficial interest in the global notes;

you are not considered to be the owner or holder of the global note or any note it represents for any purpose; and

all payments on the global note will be made to DTC or its nominee.

The laws of some jurisdictions require that certain kinds of purchasers can only own securities in physical, certificated form. These laws may limit your ability to acquire interest in the notes and to transfer or encumber your beneficial interests in the global note to these types of purchasers.

Only institutions, such as a securities broker or dealer, that have accounts with DTC or its nominee, called participants, and persons that may hold beneficial interests through participants can own a beneficial interest in the global note. The only place where the ownership of beneficial interests in the global note appears and the only way the transfer of those interests can be made is on the records kept by DTC (for its participants' interests) and the records kept by those participants (for interests participants hold on behalf of other persons).

Secondary trading in bonds and notes of corporate issuers is generally settled in clearinghouse (that is, next day) funds. In contrast, beneficial interests in a global note usually trade in DTC's same day funds settlement system, and settle in immediately available funds. We make no representation as to the effect that settlement in immediately available funds will have on trading activity in those beneficial interests.

So long as DTC through Cede & Co. is the sole registered holder of the notes, we will make cash payments of interest on, and the repurchase price of, the global note only to Cede & Co., the nominee for DTC, as the registered owner of the global notes. We will make these payments by wire transfer of immediately available funds on each payment date.

We have been informed that, with respect to any cash payment of interest on, principal of, or the repurchase price of, the global note, DTC's practice is to credit participants' accounts on the payment date with payments in amounts proportionate to their respective beneficial interests in the notes represented by the global note as shown on DTC's records, unless DTC has reason to believe that it will not receive payment on that payment date. Payments by participants to owners of beneficial interests in notes represented by the global notes held through participants is the responsibility of those participants, as is now the case with securities held for the accounts of customers registered in street name.

We also understand that neither DTC nor Cede & Co. will consent or vote with respect to the notes. We have been advised that under its usual procedures, DTC will mail an omnibus proxy to us as soon as possible after the record date. The omnibus proxy assigns Cede & Co.'s consenting or voting rights to those participants to whose accounts the notes are credited on the record date identified in a listing attached to the omnibus proxy.

Because DTC can only act on behalf of participants, who in turn act on behalf of indirect participants, the ability of a person having a beneficial interest in the principal amount represented by the global note to pledge or otherwise encumber their interest in the note to persons or entities that do not participate in the DTC book entry system, or otherwise take actions in respect of that interest, may be adversely affected by the lack of a physical certificate evidencing its interest.

DTC has advised us that it will take any action permitted to be taken by a holder of notes (including the presentation of notes for exchange) only at the direction of one or more participants to whose account with DTC interests in the global note are credited and only in respect of such portion of the principal amount of the notes represented by the global note as to which such participant has, or participants have, given such direction.

DTC has also advised us that it is:

a limited purpose trust company organized under the laws of the State of New York;

a member of the Federal Reserve System;

Table of Contents

a clearing corporation within the meaning of the Uniform Commercial Code, as amended; and

a clearing agency registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934.

DTC was created to hold securities for its participants and to facilitate the clearance and settlement of securities transactions between participants through electronic book-entry changes in accounts of its participants. Participants include securities brokers and dealers, banks, trust companies and clearing corporations and may include certain other organizations. Certain of such participants (or their representatives), together with other entities, own DTC. Indirect access to the DTC system is available to other entities such as banks, brokers, dealers and trust companies that clear through or maintain a custodial relationship with a participant, either directly or indirectly.

DTC's policies and procedures, which may change periodically, apply to payments, transfers, exchanges and other matters relating to beneficial interests in the global note. The trustee and we have no responsibility or liability for any aspect of DTC's or any participant's records relating to beneficial interests in the global note, including for payments made on the global note, and we and the trustee are not responsible for maintaining, supervising or reviewing any of those records.

Conversion Rights

You may, at your option, convert the principal amount of any note that is an integral multiple of \$1,000 into shares of our common stock at any time prior to the close of business on the maturity date, unless the note has been previously repurchased or redeemed at your option. If the notes are subject to repurchase, you may convert your notes at any time before the close of business on the business day immediately preceding the date fixed for repurchase, unless we default in making the payment due upon repurchase. In each case, the initial conversion rate is equal to 1266 shares per \$1,000 principal amount of notes, which is equivalent to a conversion price of approximately \$0.79 per share. The conversion rate is subject to adjustment as described below.

You can convert the note by delivering the note to the trustee's corporate trust office, accompanied by a duly signed and completed notice of conversion, a copy of which may be obtained from the trustee. In the case of a global note, we have been informed that DTC will effect the conversion upon notice from the holder of a beneficial interest in the global note in accordance with DTC's rules and procedures. The conversion date is the date on which the note and the duly signed and completed notice of conversion are so delivered to the trustee. As promptly as practicable on or after the conversion date, we will issue and deliver to the trustee a certificate or certificates for the number of full shares of common stock issuable upon conversion, together with payment in fractional shares, and the trustee shall deliver the certificate(s) to the conversion agent for delivery to the holder of the note being converted. The shares of our common stock issuable upon conversion of the notes will be fully paid and nonassessable.

If you surrender a note for conversion on a date that is not an interest payment date, you are not entitled to receive any interest for the period from the preceding interest payment date to the date of conversion, except as described below. However, if you are a holder of a note on a regular record date, including a note that is subsequently surrendered for conversion after the regular record date, you receive the interest payable on such note on the next interest payment date. To correct for this resulting overpayment of interest, we require that any note surrendered for conversion during the period from the close of business on a regular record date to the opening of business on the next interest payment date be accompanied by payment of an amount equal to the interest payable on such interest payment date on the principal amount of notes being surrendered for conversion. However, you are not required to make that payment if you are converting a note, or a portion of a note, that you are entitled to require us to repurchase from you, if your conversion right would terminate because of the repurchase between the regular record date and the close of business on the next interest payment date.

The Indenture provides that the number of Conversion Shares that may be acquired by you upon any conversion of the notes (or otherwise in respect hereof) shall be limited to the extent necessary to insure that, following such exercise (or other issuance), the total number of shares of Common Stock then beneficially owned by you and your Affiliates and any other persons whose beneficial ownership of Common Stock would be aggregated with yours for purposes of Section 13(d) of the Exchange Act, does not exceed 9.99% of the total number of issued

Table of Contents

and outstanding shares of Common Stock (including for such purpose the shares of Common Stock issuable upon such conversion). This provision shall not restrict the number of shares of Common Stock which you may receive or beneficially own in order to determine the amount of securities or other consideration that you may receive in the event of a Change in Control. This restriction may not be waived.

If we distribute rights or warrants (other than those referred to in paragraph (2) below) pro rata to holders of common stock, so long as any such rights or warrants have not expired or been redeemed by us, the holder of any note surrendered for conversion is entitled to receive upon such conversion, in addition to the shares of common stock issuable upon such conversion (which we refer to in this prospectus as the "conversion shares"), a number of rights or warrants to be determined as follows:

if such conversion occurs on or prior to the date for the distribution to the holders of rights or warrants of separate certificates evidencing such rights or warrants (which we refer to in this prospectus as the "distribution date"), the same number of rights or warrants to which a holder of a number of shares of common stock equal to the number of conversion shares is entitled at the time of such conversion in accordance with the terms and provisions of, and applicable to, the rights or warrants; and

if such conversion occurs after such distribution date, the same number of rights or warrants to which a holder of the number of shares of common stock into which such note was convertible immediately prior to such distribution date would have been entitled on such distribution date in accordance with the terms and provisions of, and applicable to, the rights or warrants.

No other payment or adjustment for interest, or for any dividends on our common stock, will be made upon conversion. If you receive common stock upon conversion of a note, you will not be entitled to receive any dividends payable to holders of common stock as of any record date before the close of business on the conversion date. We will not issue fractional shares upon conversion of notes. Instead, we will pay an amount in cash based on the closing sales price of our common stock on the conversion date.

If you deliver a note for conversion, you are not required to pay any taxes or duties in respect of the issuance or delivery of common stock on conversion. However, you are required to pay any tax or duty that may be payable in respect of any transfer involved in the issuance or delivery of our common stock in a name other than yours. We will not issue or deliver certificates representing shares of common stock unless the person requesting the issuance or delivery has paid to us the amount of any such tax or duty or has established to our satisfaction that no such tax or duty is payable.

The conversion rate is subject to adjustment if, among other things:

- (1) there is a dividend or other distribution payable in common stock on shares of our common stock;
- (2) we issue to all holders of common stock rights, options or warrants entitling them to subscribe for or purchase common stock at less than the then current market price, calculated as described in the indenture, of our common stock; however, if those rights, options or warrants are only exercisable upon the occurrence of specified triggering events, then the conversion rate will not be adjusted until the triggering events occur;
- (3) we subdivide, reclassify or combine our common stock;
- (4) we distribute to all holders of our common stock evidences of our indebtedness, shares of capital stock, cash or assets, including securities, but excluding:
 - those dividends, rights, options, warrants and distributions referred to in paragraphs (1) and (2) above;
 - dividends and distributions paid in cash (except as set forth in paragraphs (5) and (6) below); and
 - distributions upon a merger or consolidation as discussed below;
- (5) we make a distribution consisting exclusively of cash (excluding portions of distributions referred to in clause (4) above and cash distributed upon a merger or consolidation as discussed below) to all holders of our common stock if the aggregate amount of the distribution combined together with (A) all other such cash

Table of Contents

distributions made within the preceding 365-day period in respect of which no adjustment has been made and (B) any cash and the fair market value of other consideration payable in respect of any tender offer by us or any of our subsidiaries for our common stock concluded within the preceding 365-day period in respect of which no adjustment has been made, exceeds 10% of our market capitalization, being the product of the current market price per share of our common stock on the record date for such distribution and the number of shares of common stock then outstanding; or

(6) the successful completion of a tender offer made by us or any of our subsidiaries for our common stock that involves aggregate consideration that, together with (A) any cash and the fair market value of other consideration payable in a tender offer by us or any of our subsidiaries for our common stock concluded within the 365-day period preceding the completion of such tender offer in respect of which no adjustment has been made and (B) the aggregate amount of any such all cash distributions referred to in paragraph (5) above to all holders of common stock within the 365-day period preceding the expiration of such tender offer in respect of which no adjustments have been made, exceeds 10% of our market capitalization on the expiration of such tender offer.

If we implement a new rights plan, we are required under the indenture to provide that the holder of notes receives the rights upon conversion of the notes, whether or not these rights were separated from the common stock prior to conversion, subject to certain limited exceptions.

We reserve the right to make such increases in the conversion rate in addition to those required by the provisions described above as we may consider to be advisable so that any event treated for United States federal income tax purposes as a dividend of stock or stock rights is not taxable to the recipients. We are not required to make any adjustment to the conversion rate until the cumulative required adjustments amount to 1.0% or more of the conversion rate. We will compute any adjustments to the conversion rate and give notice to the holders of any such adjustments.

If we merge into or consolidate with another person or sell or transfer all or substantially all of our assets, each note then outstanding, without the consent of the holder of any note, becomes convertible only into the kind and amount of securities, cash and other property receivable upon such consolidation, merger, sale or transfer by a holder of the number of shares of common stock into which the note was convertible immediately prior to the merger, consolidation or sale. This calculation is made based on the assumption that the holder of common stock failed to exercise any rights of election that the holder may have had to select a particular type of consideration. The adjustment is not made for a merger that does not result in any reclassification, conversion, exchange or cancellation of our common stock.

We may, from time to time, increase the conversion rate by any amount for any period of at least 20 days if our board of directors has determined that such increase would be in our best interests. Any such determination will be conclusive. We will give holders of notes at least 15 days' notice of this increase in the conversion rate.

If at any time we make a distribution of property to our shareholders that would be taxable to them as a dividend for United States federal income tax purposes (for example, distributions of evidences of indebtedness or assets by us, but generally not stock dividends on common stock or rights to subscribe for common stock) and, pursuant to the anti-dilution provisions of the indenture, the number of shares into which notes are convertible is increased, that increase may be deemed for United States federal income tax purposes to be the payment of a taxable dividend to holders of notes. For more details, see the section of this prospectus entitled "Certain Federal Income Tax Considerations."

Make Whole Payment

If a note is converted prior to April 30, 2014, we will pay the holder of the converted note an amount equal to \$810 per \$1,000 principal amount of notes converted less interest paid with respect to such converted notes before the relevant conversion date (the "Make Whole Amount"). The Make Whole Amount will be paid in cash within 5 business days of the relevant conversion date of the notes.

Table of Contents

Right to Require Repurchase upon a Change in Control

If a change in control occurs, you have the right, at your option, to require us to repurchase all of your notes, or any portion of the principal amount of your notes that is equal to \$1,000 or any greater integral multiple of \$1,000. The price we are required to pay is 100% of the principal amount of the notes to be repurchased, together with interest accrued to the repurchase date.

Within 30 days after the occurrence of a change in control, we will mail you notice of the change in control and of your repurchase right arising as a result of the change in control. We will also deliver a copy of this notice to the trustee. To exercise the repurchase right, you must deliver, on or before the 30th day (or such greater period as may be required by applicable law) after the date of our notice, irrevocable written notice to the trustee of your exercise of your repurchase right, together with the notes with respect to which that right is being exercised. We are required to make the repurchase on a date that is no later than 45 days after your notice to the trustee.

A change in control is deemed to have occurred at such time, after the original issuance of the notes, any of the following occurs:

any person, including any syndicate or group deemed to be a person under Section 13(d)(3) of the Securities Exchange Act of 1934, (1) acquires beneficial ownership, directly or indirectly, through a purchase, merger or other acquisition transaction or series of transactions, of shares of Cell Therapeutics, Inc.'s capital stock entitling that person to exercise more than 50% of the total voting power of all shares of our capital stock entitled to vote generally in elections of directors; however, any acquisition by Cell Therapeutics, Inc., any of its subsidiaries or any of our employee benefit plans will not trigger this provision or (2) succeeds in having sufficient of its nominees (who are not supported by a majority of the then current board of directors) elected to the board of directors of Cell Therapeutics, Inc. such that such nominees, when added to any existing directors remaining on the board of directors after such election who are affiliates of or acting in concert with such person, shall constitute a majority of the board of directors;

we consolidate with or merge with or into any other person or another person merges into us, except if the transaction satisfies any of the following:

the transaction is a merger (A) that does not result in any reclassification, conversion, exchange or cancellation of outstanding shares of our capital stock and (B) pursuant to which holders of our common stock immediately prior to the transaction have, directly or indirectly, 50% or more of the total voting power of all shares of capital stock or other ownership interest of the continuing or surviving person entitled to vote generally in elections of directors of the continuing or surviving person immediately after the transaction; or

the transaction is a merger effected only to change our jurisdiction of incorporation and it results in a reclassification, conversion or exchange of outstanding shares of our common stock only into shares of common stock of Cell Therapeutics, Inc. or another corporation; or

we convey, transfer, sell, lease or otherwise dispose of all or substantially all of our assets to another person.

For purposes of these provisions:

the conversion price is equal to \$1,000 divided by the conversion rate; and

whether a person is a beneficial owner is determined in accordance with Rule 13d-3 under the Securities Exchange Act of 1934. Any repurchase of notes arising as a result of the change in control will be made in compliance with all applicable laws, rules and regulations, including, if applicable Regulation 14E under the Securities Exchange Act of 1934 and the rules thereunder and all other applicable federal and state securities laws. To the extent the provisions of any, securities laws or regulations conflict with the provisions of this covenant, our

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

compliance with such laws and regulations shall not be deemed to cause a breach of our obligations under the indenture.

We may, to the extent permitted by applicable law, at any time purchase notes in the open market or by tender or by private agreement. Any note that we so purchase may, to the extent permitted by applicable law, be reissued or resold or may, at our option, be surrendered to the trustee for cancellation. Any notes surrendered may not be reissued or resold and will be canceled promptly.

S-39

Table of Contents

The definition of change in control includes a phrase relating to the conveyance, transfer, sale, lease or disposition of all or substantially all of our assets. There is no precise, established definition of the phrase substantially all under applicable law. Accordingly, your ability to require us to repurchase your notes as a result of conveyance, transfer, sale, lease or other disposition of less than all of our assets may be uncertain.

The foregoing provisions may not necessarily provide you with protection if we are involved in a highly leveraged or other transaction that may adversely affect you.

Mergers and Sales of Assets

Without the consent of the holders of the notes, we may not consolidate with or merge into any other person, or convey, transfer, sell or lease our properties and assets substantially as an entirety to any person, and we may not permit any person to consolidate with or merge into us or convey, transfer, sell or lease such person's properties and assets substantially as an entirety to us, unless each of the following requirements is met:

We are the surviving person or the person formed by the consolidation or into which we are merged or the person to which its properties and assets are conveyed, transferred, sold or leased, is (1) a corporation, limited liability company, partnership or trust organized and existing under the laws of the United States, any State or the District of Columbia or (2) organized under the laws of a jurisdiction outside the United States and has common stock or American Depositary Shares representing such common stock traded on a national securities exchange in the United States, including The Nasdaq Stock Market, Inc. and, in each case, if an entity other than us, expressly assumes the due and punctual payment of the principal of, any premium, and interest (and liquidated damages, if any) on the notes and the performance of our other covenants under the indenture; and

immediately after giving effect to that transaction, no event of default, and no event that, after notice or lapse of time or both, would become an event of default, shall have occurred and be continuing; and

other conditions described in the indenture are met.

Upon any consolidation or merger or any transfer of all or substantially all of our assets, the successor corporation formed by such consolidation or into which we are merged or to which such transfer is made, shall succeed to, and be substituted for, and may exercise every right and power we have under the indenture with the same effect as if such successor corporation had been named in the indenture as Cell Therapeutics, Inc., and we shall be released from the obligations under the notes and the indenture except with respect to any obligations that arise from, or are related to, such transaction.

Issuance of Additional Equity Securities; Retirement or Redemption of Outstanding Debt and Preferred Stock.

From the date of closing until June 15, 2008, we will not issue or agree to issue any equity security or other security exchangeable for, convertible into or otherwise enabling the holder thereof to acquire any of our equity securities (other than certain issuances including those relating to certain acquisitions and corporate partnering agreements), provided that we may enter into equity line of credit agreements prior to that date that may be used after July 15, 2008. In the event the Company completes a second closing of this offering for an additional \$5,000,000 in 13.5% convertible senior notes due 2014 by June 15, 2008, then we will extend the June 15, 2008 date to July 31, 2008. In addition, in the event the warrants for additional notes are fully exercised or the Company exercises its put right to compel a second closing, we have agreed not to issue any equity (other than certain issuances including those relating to certain acquisitions and corporate partnering agreements) for a period of five months from such exercise or second closing. Additionally, for a period of three months following closing, we will not repurchase, exchange, redeem or retire any of our existing notes or outstanding preferred stock, except that the convertible notes that mature June 15, 2008 can be paid at maturity or extended, provided that no equity issued to induce such extension which matures prior to June 15, 2008 can be publicly traded before the date that is five months after the closing of this offering.

Table of Contents

Events of Default

The following are events of default under the indenture:

we fail to pay principal of or any premium on any note when due;

we fail to pay any interest or the Make-Whole Amount on any note when due and that default continues for 30 days;

we fail to give the notice that we are required to give if there is a change in control;

we fail to perform any other covenant in the indenture and that failure continues for 60 days after written notice to us by the trustee or the holders of at least \$1,000,000 in aggregate principal amount of outstanding notes;

we fail to pay when due the principal of any indebtedness for money borrowed by us or any of our significant subsidiaries, if any, in excess of \$10 million if the indebtedness is not discharged and such failure continues for 30 days or more, or, if such indebtedness has been accelerated, such acceleration is not annulled, within 30 days after written notice to us by the trustee or the holders of at least \$1,000,000 in aggregate principal amount of the outstanding notes; and

certain events of bankruptcy, insolvency or reorganization with respect to us and our significant subsidiaries specified in the indenture. Subject to the provisions of the indenture relating to the trustee's duties, if an event of default exists, the trustee is not obligated to exercise any of its rights or powers under the indenture at the request or direction of any of the holders, unless they have offered to the trustee reasonable indemnity. Subject to such trustee indemnification provisions, the holders of a majority in aggregate principal amount of the outstanding notes have the right to direct the time, method and place of conducting any proceeding for any remedy available to the trustee or exercising any trust or power conferred on the trustee, provided that such direction does not conflict with any rule of law or with the indenture, and the trustee may take any other action the trustee deems proper which is not inconsistent with such direction.

If an event of default, other than an event of default arising from events of bankruptcy, insolvency or reorganization with respect to us, occurs and is continuing, either the trustee or the holders of at least 25% in principal amount of the outstanding notes may accelerate the maturity of all notes. After acceleration, but before a judgment or decree based on acceleration, the holders of a majority in aggregate principal amount of outstanding notes may, under circumstances set forth in the indenture, rescind the acceleration if all events of default, other than the non-payment of principal of the notes which have become due solely because of the acceleration, have been cured or waived as provided in the indenture. If an event of default arising from events of bankruptcy, insolvency or reorganization with respect to us occurs and is continuing, then the principal of, and accrued interest (and liquidated damages, if any) on, all of the notes will automatically become immediately due and payable without any declaration or other act on the part of the holders of the notes or the trustee.

You do not have any right to institute any proceeding relating to the indenture, or to appoint a receiver or a trustee, or for any other remedy under the indenture, unless:

you have given the trustee written notice of a continuing event of default;

the registered holders of at least \$1,000,000 of the aggregate principal amount of all outstanding notes have made a written request of the trustee to take action because of the default and have furnished reasonable indemnification to the trustee against the cost, liabilities and expenses of taking such action;

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

the trustee shall not have taken action for 30 days after receiving such notice and offer of indemnification; or

the trustee has not received any direction inconsistent with such written request from the holders of a majority of the aggregate principal amount of all outstanding notes during such 30-day period.

S-41

Table of Contents

These limitations do not apply to a suit for the enforcement of payment of the principal of, or any premium or interest (and liquidated damages, if any) on, a note, or the repurchase price payable for a note on or after the due dates for such payments, or of the right to convert the note in accordance with the indenture.

We will furnish to the trustee annually a statement as to our performance of our obligations under the indenture and as to any default in performance.

Modification and Waiver

The indenture contains provisions permitting us and the trustee to enter into a supplemental indenture for certain limited purposes without the consent of the holders of the notes. With the consent of the holders of not less than a majority in aggregate principal amount of the notes at the time outstanding, we and the trustee are permitted to amend or supplement the indenture or any supplemental indenture or modify the rights of the holders, provided, that no such modification may, without the consent of each holder affected thereby:

change the stated maturity of the principal or interest of any note;

reduce the principal amount, any premium or interest on any note;

amend or modify our obligation to make or consummate a repurchase offer upon a change in control after our obligation to make a change in control repurchase offer arises;

change the place or currency of payment on any note;

impair the right to institute suit for the enforcement of any payment on any note;

adversely affect the right of any holder of notes to convert its notes;

reduce the percentage of holders whose consent is needed to modify, amend or waive any provision in the indenture; or

modify the provisions dealing with modification and waiver of the indenture, except to increase any required percentage or to provide that certain other provisions of the indenture cannot be modified or waived without the consent of the holder of each outstanding note affected thereby.

The holders of a majority in principal amount of the outstanding notes may waive our compliance with certain restrictive provisions of the indenture. The holders of a majority in principal amount of the outstanding notes may waive any past default, except a default in the payment of principal, any premium, interest, the Make-Whole Payment or the repurchase price.

Notes are not considered outstanding if money for their payment has been deposited or set aside in trust for the holders.

Replacement of Notes

We will replace, at the holders' expense, notes that become mutilated, destroyed, stolen or lost upon delivery to the trustee of the mutilated notes or evidence of the loss, theft or destruction thereof satisfactory to us and the trustee. In the case of a lost, stolen or destroyed note, indemnity satisfactory to the trustee and us may be required at the expense of the holder of the note before a replacement note will be issued.

No Personal Liability of Shareholders, Officers, Directors and Employees

No direct or indirect shareholder, officer, director or employee, as such, past, present or future of CTI, or any successor entity, shall have any personal liability in respect of our obligations under the indenture or the notes solely by reason of his or its status as such shareholder, officer, director or employee.

S-42

Table of Contents

Governing Law

The indenture, the notes and the registration rights agreement are governed by and construed in accordance with the laws of the State of New York, United States of America.

The Trustee

The trustee for the holders of notes issued under the indenture is U.S. Bank National Association. If an event of default occurs, and is continuing, the trustee is required to use the degree of care of a prudent person in the conduct of his own affairs in the exercise of its powers. Subject to these provisions, the trustee is under no obligation to exercise any of its rights or powers under the indenture at the request of any holders of notes, unless they have offered the trustee reasonable security or indemnity.

Absence of Public Market

There is no existing market for the notes and there can be no assurance as to the liquidity of any markets that may develop for the notes, the ability of holders to sell their notes or at what price holders of the notes will be able to sell their notes. Future trading prices of the notes will depend upon many factors including, among other things, prevailing interest rates, our operating results, the price of our common stock and the market for similar securities. . There is no established public trading market for the notes. We do not intend to apply for listing of the notes on any securities exchange. See the section entitled "Plan of Distribution" for more information.

DESCRIPTION OF WARRANTS FOR COMMON STOCK

The material terms and provisions of the warrants being offered pursuant to this prospectus supplement and the accompanying prospectus are summarized below. This summary is subject to, and qualified in its entirety by, the form of warrant to purchase common stock to be filed as an exhibit to our current report on Form 8-K, which we expect to file with the SEC on or about May 2, 2008. The warrants are not being offered pursuant to this prospectus supplement and the accompanying prospectus.

The warrants to purchase common stock are not immediately exercisable and their exercisability is contingent upon the Company obtaining shareholder approval to increase the number of authorized shares of common stock available for issuance. The warrants will terminate on the fifth anniversary of the date the warrants become exercisable. 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. In addition, we may require the holder to exercise the warrant in full or, if such warrant has already been exercised in part, to exercise the warrant for the remainder of the shares of common stock issuable under the warrant in the event that the Company meets two potential milestone events as well as certain other conditions.

The exercise price per share of common stock purchasable upon exercise of the warrants is \$0.95 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 the date of this prospectus supplement, warrants to purchase 19,070,610 shares of the company's common stock were outstanding, which number does not include the warrants issued in this offering.

DESCRIPTION OF WARRANTS FOR NOTES AND ADDITIONAL WARRANTS

The material terms and provisions of the warrants being offered pursuant to this prospectus supplement and the accompanying prospectus are summarized below. This summary is subject to, and qualified in its entirety by, the form of warrant to purchase notes to be filed as an exhibit to our current report on Form 8-K, which we expect to file with the SEC on or about May 2, 2008. The warrants are not being offered pursuant to this prospectus supplement and the accompanying prospectus.

Table of Contents

The warrants to purchase convertible notes will constitute a right to purchase, at the same per-unit price paid for the notes and warrants to purchase common stock issued with such notes, up to \$67.5 million of units consisting of convertible senior notes and warrants to purchase shares of our common stock with an aggregate exercise price equal to 50% of the principal amount of the notes issued on exercise of the warrant. The notes to be issued on exercise of the warrant will have the same terms as the notes being issued in this offering except that they will not have an optional redemption right, will be limited to a three-year term and will bear interest at the rate of 12.5%. The make whole amount for such notes will be based on the term and interest rate of the note (12.5% for 3 years). The warrants are immediately exercisable and will terminate on the first anniversary of the date of issuance. The warrants may be exercise only once, in whole or in part, at the option of the 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. We also may require the holder to exercise the warrant in full or, if such warrant has already been exercised in part, to exercise the warrant for the remainder of the notes and warrants in the event that the Company meets two potential milestone events as well as certain other conditions. In addition, if the per-share price of our common stock remains at or above \$0.87 per share, the Company can put the securities issued on exercise of this warrant to the purchaser for \$67.5 million. The warrants to purchase notes are only exercisable for cash.

CERTAIN U.S. FEDERAL INCOME TAX CONSIDERATIONS

The following is a general discussion of certain United States federal income tax considerations relevant to holders of the notes and common stock into which the notes may be converted. This discussion is based upon the Internal Revenue Code of 1986, as amended (the "Code"), Treasury Regulations, Internal Revenue Service ("IRS") rulings and judicial decisions now in effect, all of which are subject to change (possibly, with retroactive effect) or different interpretations. There can be no assurance that the IRS will not challenge one or more of the tax consequences described herein, and we have not obtained, nor do we intend to obtain, a ruling from the IRS with respect to the United States federal income tax consequences of acquiring or holding notes or common stock. This discussion does not purport to deal with all aspects of United States federal income taxation that may be relevant to a particular holder in light of the holder's circumstances (for example, persons subject to the alternative minimum tax provisions of the Code or a holder whose functional currency is not the United States dollar). Also, it is not intended to be wholly applicable to all categories of investors, some of which (such as dealers in securities or currencies, traders in securities that elect to use a mark-to-market method of accounting, banks, thrifts, regulated investment companies, insurance companies, tax-exempt organizations, and persons holding notes or common stock as part of a hedging or conversion transaction or straddle or persons deemed to sell notes or common stock under the constructive sale provisions of the Code) may be subject to special rules. The discussion also does not discuss any aspect of state, local or foreign law, or United States federal estate and gift tax law as applicable to the holders of the notes and common stock into which the notes may be converted. In addition, this discussion is limited to purchasers of notes who hold the notes and common stock as capital assets within the meaning of Section 1221 of the Code (generally, for investment). This summary also assumes that the IRS will respect the classification of the notes as indebtedness for federal income tax purposes.

The purchaser of the notes and the preferred stock is advised to consult its own tax advisors regarding the federal, state, local and foreign tax consequences of the purchase, ownership and disposition of the notes and the common stock in its particular situation.

As used herein, the term "U.S. Holder" means a beneficial holder of a note or common stock that for United States federal income tax purposes is (i) a citizen or resident (as defined in Section 7701 (b) of the Code) of the United States (unless such person is not treated as a resident of the United States under an applicable income tax treaty), (ii) a corporation created or organized under the laws of the United States or any political subdivision thereof or other entity treated as a corporation for United States federal income tax purposes, (iii) an estate the income of which is subject to United States federal income taxation regardless of its source and (iv) in general, a trust subject to the primary supervision of a court within the United States and the control of a United States person as described in Section 7701(a)(30) of the Code. A "Non-U.S. Holder" is any beneficial holder of a note or common stock other than a U.S. Holder or an entity treated as a partnership for United States tax purposes.

If a partnership (including for this purpose any entity, domestic or foreign, treated as a partnership for United States tax purposes) is a beneficial owner of the notes or common stock into which the notes may be converted, the United States tax treatment of a partner in the partnership generally will depend on the status of the partner and the activities of the partnership. As a general matter, income earned through a foreign or domestic partnership is attributed to its owners. A holder of the notes or common stock into which the notes may be converted that is a partnership, and partners in such partnership, should consult their individual tax advisors about the United States federal income tax consequences of holding and disposing of the notes and the common stock into which the notes may be converted.

Table of Contents

U.S. Holders

Interest

U.S. Holders are required to recognize as ordinary income any interest paid or accrued on the notes in accordance with their regular method of accounting.

Market Discount

If a U.S. Holder acquires a note other than in connection with its original issue at a price that is less than its issue price, the amount of such difference is treated as market discount for United States federal income tax purposes, unless such difference is less than ~~that~~ one percent of the principal amount at maturity multiplied by the number of complete years to maturity from the date of acquisition. Under the market discount rules, a U.S. Holder is required to treat any gain on the sale, exchange, retirement or other disposition of a note as ordinary income to the extent of the accrued market discount that has not previously been included in income. If a U.S. Holder disposes of a note which has accrued market discount in a nonrecognition transaction in which the U.S. Holder receives property the basis of which is determined in whole or in part by reference to the basis of the note, the accrued market discount is generally not includible in income at the time of such transaction. Instead, the accrued market discount attaches to the property received in the nonrecognition transaction and is recognized as ordinary income upon the disposition of such property. Such nonrecognition transaction should include the conversion of a note for our shares of common stock. In general, the amount of market discount that has accrued is determined on a ratable basis, by allocating an equal amount of market discount to each day of every accrual period. A U.S. Holder may, however, elect to determine the amount of accrued market discount allocable to any accrual period under the constant yield method. A United States holder may elect to include market discount in income currently as it accrues, on either a ratable or constant interest rate method. Any such election applies to all debt instruments acquired by the U.S. Holder on or after the first day of the first taxable year to which the election applies, and is irrevocable without the consent of the IRS. If such an election is made, the U.S. Holder's tax basis in the notes will be increased by the amount of market discount included in income. Unless a U.S. Holder elects to include market discount in income as it accrues, such U.S. Holder may not be allowed to deduct on a current basis a portion of the interest expense on any indebtedness incurred or continued to purchase or carry notes with market discount.

Amortizable Bond Premium

If a U.S. Holder purchases a note at a price that exceeds the principal amount of the note, the amount of the difference is referred to as bond premium for United States federal income tax purposes. The U.S. holder may elect to amortize the bond premium against interest payable on the note, except to the extent that the bond premium is attributable to the conversion feature of the note. In addition, any bond premium in excess of the interest payable on the note may be deductible over the term of the note. If a U.S. Holder elects to amortize bond premium, the amount of bond premium allocable to each period will be based on a constant yield to maturity over the period the note is held. The amortized bond premium would reduce the U.S. Holder's tax basis in the note. Any such election applies to all fully taxable bonds held by the U.S. Holder at the beginning of the first taxable year to which the election applies, and all fully taxable bonds acquired thereafter, and is irrevocable without the consent of the IRS. If the election is not made, a U.S. Holder must include the full amount of each interest payment in income as it accrues or is paid, and premium will not be taken into account until principal payments are received on the note or the note is sold or otherwise disposed of.

Conversion of Notes Into Our Common Stock

A U.S. Holder generally will not recognize any income, gain or loss upon conversion of a note into our common stock except (i) with respect to cash received in lieu of a fractional share of our common stock or (ii) in payment of accrued interest, which will be taxable as such. Cash received in lieu of a fractional share of common stock should generally be treated as a payment in exchange for such fractional share. Gain or loss recognized on the receipt of cash paid in lieu of such fractional share generally will equal the difference between the amount of cash received and the amount of tax basis allocable to the fractional share. The adjusted basis of shares of common stock

Table of Contents

received on conversion will equal the adjusted basis of the note converted (reduced by the portion of adjusted basis allocated to any fractional share of common stock exchanged for cash). The holding period of such common stock received on conversion will generally include the period during which the converted notes were held prior to conversion.

The conversion rate of the notes is subject to adjustment under certain circumstances. Section 305 of the Code and the Treasury Regulations issued thereunder may treat the holders of the notes as having received a constructive distribution, resulting in a taxable dividend (subject to a possible dividends received deduction in the case of corporate holders) to the extent of our current and/or accumulated earnings and profits, if, and to the extent that certain adjustments in the conversion rate, which may occur in limited circumstances (particularly an adjustment to reflect a taxable dividend to holders of common stock), increase the proportionate interest of a holder of notes in our assets or earnings and profits, whether or not such holder ever exercises its conversion privilege. Therefore, U.S. Holders may recognize dividend income in the event of a deemed distribution even though they may not receive any cash or property. Moreover, if there is not a full adjustment to the conversion ratio of the notes to reflect a stock dividend or other event increasing the proportionate interest of the holders of outstanding common stock in our assets or earnings and profits, then such increase in the proportionate interest of the holders of the common stock generally will be treated as a distribution to such holders, taxable as a dividend (subject to a possible dividends received deduction in the case of corporate holders) to the extent of our current and/or accumulated earnings and profits. Adjustments to the conversion rate made pursuant to a bona fide reasonable adjustment formula which has the effect of preventing dilution in the interest of the holders of the debt instruments, however, will generally not be considered to result in a constructive dividend distribution.

Sale, Exchange, Retirement or Repurchase of the Notes

Each U.S. Holder generally will recognize gain or loss upon the sale, exchange (other than by exercise of the conversion privilege), retirement, repurchase, or other disposition of notes measured by the difference (if any) between (i) the amount of cash and the fair market value of any property received and (ii) such holder's adjusted tax basis in the notes. A U.S. Holder's adjusted tax basis in a note generally will equal the cost of the note to such holder plus any amounts paid in connection with a conversion representing interest at the time of such conversion less any principal payments received by such holder (increased by the amount of market discount, if any, previously included in income or decreased by the amount of amortized bond premium, if any). Subject to the market discount rules discussed above, any such gain or loss recognized on the sale, exchange, retirement, repurchase or other disposition of a note should be capital gain or loss and will generally be long-term capital gain or loss if the note has been held for more than 12 months at the time of the sale or exchange. Generally, long term capital gain for individuals is eligible for a reduced rate of taxation. Capital gain that is not long term capital gain is taxed at ordinary income rates. The deductibility of capital losses is subject to certain limitations.

The Common Stock

Distributions (including constructive distributions), if any, paid on the common stock that a U.S. Holder receives upon conversion of a note generally will constitute a taxable dividend, to the extent made from our current and/or accumulated earnings and profits, as determined under United States federal income tax principles. Any distribution in excess of our current and accumulated earnings and profits will be treated first as a tax-free return of capital, which will reduce the U.S. Holder's adjusted tax basis in the shares (but not below zero). To the extent such a distribution exceeds the U.S. Holder's adjusted tax basis in the shares, the distribution will generally be taxable as capital gain. Dividends received by a corporate U.S. Holder may be eligible for a dividends received deduction. For taxable years beginning after December 31, 2002 and before January 1, 2009, subject to certain exceptions, dividends received by non-corporate shareholders (including individuals) from domestic corporations generally are taxed at the same preferential rates that apply to long-term capital gain.

Gain or loss realized on the sale or exchange of common stock will equal the difference between the amount realized on such sale or exchange and the U.S. Holder's adjusted tax basis in such common stock. Such gain or loss will generally be long-term capital gain or loss if the holder has held or is deemed to have held the common stock for more than twelve months. Generally, long-term capital gain of non-corporate shareholders is eligible for a reduced rate of taxation. The deductibility of capital losses is subject to certain limitations.

Table of Contents

The Preferred Stock

The purchaser of the convertible preferred stock is advised to consult its own tax advisors regarding the federal, state, local and foreign tax consequences of the purchase, ownership, conversion, exercise and disposition of the convertible preferred stock in its particular situation.

Non-U.S. Holders

For purposes of the following discussion, dividends and gain on the sale, exchange or other disposition of a note or common stock will be considered to be U.S. trade or business income if such income or gain is (i) effectively connected with the conduct of a United States trade or business and (ii) in the case of a Non-U.S. Holder eligible for the benefits of an applicable United States bilateral income tax treaty, attributable to a permanent establishment (or, in the case of an individual, a fixed base) in the United States.

Taxation of Interest

Payments of interest to Non-U.S. Holders are generally subject to U.S. federal income tax at a rate of 30 percent, collected by means of withholding. Payments of interest on the notes to most Non-U.S. Holders, however, will qualify as portfolio interest, and thus will be exempt from the withholding tax, if the holders certify their nonresident status as described below. The portfolio interest exception will not apply to payments of interest to a Non-U.S. Holder that:

Owns, actually or constructively, at least 10 percent of the total combined voting power of all classes of our stock entitled to vote within the meaning of section 871(h)(3) of the Code, or

Is a controlled foreign corporation that is related, directly or indirectly, to us.

Even if the portfolio interest exception does not apply, payments of interest to a nonresident person or entity might not be subject to withholding tax at a 30 percent rate, or might be subject to withholding tax at a reduced rate, under the terms of a tax treaty between the U.S. and the Non-U.S. holder's country of residence.

The portfolio interest exception, entitlement to treaty benefits and several of the special rules for Non-U.S. Holders described below apply only if the holder certifies its nonresident status. A Non-U.S. Holder can generally meet this certification requirement by providing an accurate and complete Form W-8BEN or appropriate substitute or successor form under penalties of perjury to us or our paying agent. The portfolio interest exception, described above, may not apply to Non-U.S. Holders holding the notes in connection with the conduct of a U.S. trade or business (through a U.S. permanent establishment, in the case of a Non-U.S. Holder entitled to the benefits of an applicable tax treaty and such tax treaty so requires as a condition for taxation) on a net income basis generally in the same manner as if such holder were a U.S. person as defined under the Code, and, if the Non-U.S. Holder is a corporation, a U.S. branch profits tax equal to 30% of its effectively connected earnings and profits, subject to adjustments, unless the holder qualifies for an exemption from such tax or a lower tax rate under an applicable treaty.

Dividends

In general, dividends paid to a Non-U.S. Holder of common stock will be subject to withholding of United States federal income tax at a 30 percent rate unless such rate is reduced by an applicable income tax treaty. Dividends that are U.S. trade or business income are generally subject to United States federal income tax at regular income tax rates, but are not generally subject to the 30 percent withholding tax or treaty-reduced rate if the Non-U.S. Holder files a properly executed Form W-8ECI (or appropriate substitute form), as applicable with the payor. Any U.S. trade or business income received by a Non-U.S. Holder that is a corporation may also, under certain circumstances, be subject to an additional branch profits tax at a 30 percent rate or such lower rate as may be applicable under an income tax treaty. A Non-U.S. Holder of common stock who wishes to claim the benefit of an applicable treaty rate must provide a properly executed IRS Form W-8BEN (or appropriate substitute form), as applicable. In addition, a Non-U.S. Holder may under certain circumstances be required to obtain a United States taxpayer identification number and make certain certifications to us. Special procedures are provided for payments through qualified intermediaries. A Non-U.S. Holder of common stock that is eligible for a reduced rate of United States withholding tax pursuant to an income treaty may obtain a refund of amounts withheld at a higher rate by filing an appropriate claim for a refund with the IRS.

Table of Contents

Conversion of Notes Into Our Common Stock

A Non-U.S. Holder generally will not be subject to United States federal income tax on the conversion of notes into our common stock. However, cash received in lieu of a fractional share will be subject to United States federal income tax in the manner described below under **Certain Federal Income Tax Considerations Non-U.S. Holders Sale, Exchange, Retirement or Redemption of Notes or Common Stock.**

Sale, Exchange, Retirement or Redemption of Notes or Common Stock

Except as described below and subject to the discussion concerning backup withholding, any gain realized by a Non-U.S. Holder on the sale, exchange (other than by exercise of the conversion privilege for our common stock), retirement or redemption of a note or common stock generally will not be subject to United States federal income tax, unless (i) such gain is U.S. trade or business income, (ii) subject to certain exceptions, the Non-U.S. Holder is an individual who holds the note or common stock as a capital asset and is present in the United States for 183 days or more in the taxable year of the disposition, (iii) the Non-U.S. Holder is subject to tax pursuant to the provisions of United States tax law applicable to certain United States expatriates (including certain former citizens or residents of the United States), or (iv) we are a United States real property holding corporation within the meaning of Section 897 of the Code. We do not believe that we are currently a United States real property holding corporation within the meaning of Section 897 of the Code, or that we will become one in the future.

Backup Withholding and Information Reporting

The Code and the Treasury Regulations require those who make specified payments to report the payments to the IRS. Among the specified payments are interest, dividends and proceeds paid by brokers to their customers. The required information returns enable the IRS to determine whether the recipient properly included the payments in income. This reporting regime is reinforced by backup withholding rules. These rules require the payors to withhold tax from payments subject to information reporting if the recipient fails to cooperate with the reporting regime by failing to provide his taxpayer identification number to the payor, furnishing an incorrect identification number, or repeatedly failing to report interest or dividends on his returns. The backup withholding rate is currently 28 percent. The information reporting and backup withholding rules do not apply to payments to corporations, whether domestic or foreign.

Payments of interest on our notes or dividends on our common stock to individual U.S. Holders of notes or common stock will generally be subject to information reporting, and will be subject to backup withholding unless the holder provides us or our paying agent with a correct taxpayer identification number and complies with certain certification procedures.

The information reporting and backup withholding rules do not apply to payments that are subject to the 30 percent withholding tax on interest or dividends paid to nonresidents, or to payments that are exempt from that tax by application of a tax treaty or special exception. Therefore, payments to Non-U.S. Holders of interest on our notes or dividends on our common stock will generally not be subject to information reporting or backup withholding. To avoid backup withholding, a Non-U.S. Holder will have to certify its nonresident status. Some of the common means of doing so are described under **Certain Federal Income Tax Considerations Non-U.S. Holders Dividends.**

Payments made to U.S. Holders by a broker upon a sale or other disposition of notes or common stock will generally be subject to information reporting and backup withholding. If the sale is made through a foreign office of a foreign broker, the sale will generally not be subject to either information reporting or backup withholding. This exception may not apply, however, if the foreign broker is owned or controlled by United States persons, or is engaged in a United States trade or business.

Payments made to Non-U.S. Holders by a broker upon a sale or other disposition of notes or common stock will generally not be subject to information reporting or backup withholding as long as the Non-U.S. Holder certifies its foreign status.

Table of Contents

Any amounts withheld from a payment to a holder of notes or common stock under the backup withholding rules can be credited against any United States federal income tax liability of the holder and may entitle the holder to a refund, provided that the required information is furnished to the Internal Revenue Service.

The preceding discussion of certain United States federal income tax consequences is for general information only and is not tax advice. Accordingly, the investor should consult its own tax adviser as to particular tax consequences to it of purchasing, holding and disposing of the notes and the common stock issuable upon conversion of the notes, including the applicability and effect of any state, local or foreign tax laws, and of any proposed changes in applicable laws.

PLAN OF DISTRIBUTION

We are offering through Rodman & Renshaw, LLC, who acted as our sole placement agent (the "placement agent"), 9,000 shares of our convertible preferred stock at a purchase price of \$1,000 per share and \$36,000,000 in principal amount of our 13.5% convertible senior notes due 2014 to one institutional investor. In addition, the investor participating in the offering will receive warrants to purchase shares of our common stock, at an exercise price of \$0.95 per share and warrants to purchase convertible notes and additional warrants for common stock. The warrants being issued to the investor are not being registered on this prospectus supplement. In connection with this offering, we will pay fees to the placement agent. The placement agent will be working solely on a "best efforts" basis and is not purchasing or selling any shares by this prospectus supplement or the accompanying prospectus, nor is it required to arrange for the purchase and sale of any specific number or dollar amount of shares. Therefore, we may not sell the entire amount of shares of our convertible preferred stock and warrants offered pursuant to this prospectus supplement.

The securities purchase agreement provides that the obligations of the investor in the offering are subject to certain conditions precedent, including the absence of any material adverse change in our business and the receipt of certain opinions from our counsel.

Confirmations and this prospectus supplement will be delivered, or otherwise made available, to the investors who has agreed to purchase the shares of the convertible preferred stock and the 13.5% convertible senior notes, informing such investor of the closing date as to such shares. We currently anticipate that closing of the sale of 9,000 shares of convertible preferred stock, \$36,000,000 in principal amount of the 13.5% convertible senior notes and the related warrants will take place on or about April 30, 2008. The investor will also be informed of the date and manner in which it must transmit the purchase price for the securities being purchased.

On the scheduled closing date, the following will occur:

we will receive funds in the amount of the aggregate purchase price of the 9,000 shares of convertible preferred stock, \$36,000,000 in principal amount of the convertible senior notes and the related warrants less \$5,250,000;

we will receive \$5,250,000 in principal amount of our 9% convertible senior notes due 2012, and the warrants issued in connection with such note in March 2008, each marked as cancelled by the investor;

we will issue the 9,000 shares of convertible preferred stock, \$36,000,000 in convertible senior notes and the related warrants; and

we will pay the placement agent's fee in accordance with the terms of our agreement with the placement agent.

On April 30, 2008, we entered into a letter agreement with the placement agent to serve as exclusive placement agent for purchasers of our securities pursuant to our two existing shelf registration statements (File Nos. 333-143452 and 333-149982), for a period of 30 days. Pursuant to the agreement, we will pay the placement agent at closing a cash fee of \$2,850,000.

We have also agreed to pay to reimburse the placement agent for up to \$75,000 of expenses incurred in connection with the offering. The estimated offering expenses payable by us, excluding the placement agent's fees, are \$150,000, which include legal, accounting and printing costs and various other fees associated with registering

Table of Contents

and listing the shares of convertible preferred stock. We have agreed to indemnify the placement agent against certain liabilities, including liabilities under the Securities Act. We may also be required to contribute to payments the placement agent may be required to make in respect of such liabilities.

The agreement with the placement agent, the form of securities purchase agreement with the investor will be included as exhibits to our current report on Form 8-K that will be filed with the SEC in connection with the completion of this offering.

Rodman & Renshaw, LLC may be deemed to be an underwriter within the meaning of Section 2(a)(11) of the Securities Act, and any commissions received by them and any profit realized on the resale of the securities sold by them while acting as principal might be deemed to be underwriting discounts or commissions under the Securities Act. As underwriters, the placement agent would be required to comply with the requirements of the Securities Act and the Exchange Act, including, without limitation, Rule 415(a)(4) under the Securities Act and Rule 10b-5 and Regulation M under the Exchange Act. These rules and regulations may limit the timing of purchases and sales of shares of convertible preferred stock and warrants by the placement agent. Under these rules and regulations, the placement agent:

may not engage in any stabilization activity in connection with our securities; and

may not bid for or purchase any of our securities or attempt to induce any person to purchase any of our securities, other than as permitted under the Exchange Act, until it has completed its participation in the distribution.

LEGAL MATTERS

The validity of the issuance of the Cell Therapeutics, Inc. securities offered by this prospectus supplement and accompanying prospectus will be passed upon for Cell Therapeutics, Inc. by Heller Ehrman LLP, Seattle, Washington. Feldman Weinstein & Smith LLP in New York, New York is acting as counsel for the placement agent.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

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.

Our common stock is listed on the Nasdaq Global 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.

SEC rules allow us to incorporate by reference into this prospectus supplement 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. Information that we file later with the SEC, including all filings filed by us pursuant to the Exchange Act after the date of the initial registration statement and prior to the effectiveness of the registration statement, will automatically update and supersede this information.

In addition to the documents listed in the accompanying prospectus, we incorporate by reference the following documents:

our annual report on Form 10-K for the fiscal year ended December 31, 2007 filed with the SEC on March 26, 2008, as amended by Forms 10-K/A filed with the SEC on April 18, 2008 and April 23, 2008;

Table of Contents

our definitive Proxy Statements on Schedule 14A, dated and filed with the SEC on August 28, 2007 for our 2007 Annual Meeting of Shareholders and on December 21, 2007 for our Special Meeting of Shareholders;

our quarterly reports on Form 10-Q for the quarters ended March 31, 2007, June 30, 2007 and September 30, 2007, filed on May 10, 2007, August 9, 2007 and November 9, 2007, respectively;

our current reports on Form 8-K or 8-K/A filed with the SEC 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 and April 30, 2008; 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.

Any documents subsequently filed by us with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, prior to the termination of the offering, shall be deemed to be incorporated by reference into this prospectus supplement. You should rely only on the information provided or incorporated by reference in this prospectus or any prospectus supplement. We have not authorized anyone else to provide you with different information.

We will provide without charge to each person, including any beneficial owner of our common stock, 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.

Table of Contents

PROSPECTUS

\$150,000,000

Common Stock

Preferred Stock

Debt Securities

Warrants

From time to time, we may sell any of the securities listed above.

We will provide the specific terms of these securities in one or more supplements to this prospectus. You should read this prospectus, the information incorporated by reference and any prospectus supplement carefully before you invest.

Our common stock is quoted on the Nasdaq Global Market and on the MTA in Italy under the symbol CTIC.

The applicable prospectus supplement will contain information, where applicable, as to any other listing on the Nasdaq Global Market or any securities exchange or market of the securities covered by the prospectus supplement.

Investing in our securities involves significant risks, which we describe in our annual report on Form 10-K for the year ended December 31, 2007 and in other documents that we subsequently file with the Securities and Exchange Commission, and which we will describe in supplements to this prospectus.

This prospectus may not be used to offer or sell any securities unless accompanied by a prospectus supplement.

We may sell the securities to or through underwriters or dealers, directly to purchasers or through agents designated from time to time. For additional information on the methods of sale, you should refer to the section entitled "Plan of Distribution" in this prospectus. If any underwriters are involved in the sale of any securities with respect to which this prospectus is being delivered, the names of such underwriters and any applicable discounts or commissions and over-allotment options will be set forth in a prospectus supplement. The price to the public of such securities and the net proceeds we expect to receive from such sale will also be set forth in a prospectus supplement.

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 April 23, 2008

Table of Contents

TABLE OF CONTENTS

	Page
<u>About This Prospectus</u>	i
<u>Summary</u>	1
<u>Special Note Regarding Forward-Looking Statements</u>	7
<u>Risk Factors</u>	7
<u>Use of Proceeds</u>	22
<u>Description of Capital Stock</u>	23
<u>Description of Debt Securities</u>	25
<u>Description of Warrants</u>	30
<u>Legal Ownership of Securities</u>	33
<u>Plan of Distribution</u>	36
<u>Legal Matters</u>	38
<u>Experts</u>	38
<u>Where You Can Find More Information</u>	39

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 is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, using a shelf registration process. Under the shelf registration process, we may sell common stock, preferred stock, debt securities or warrants in one or more offerings up to a total dollar amount of \$150 million. This prospectus provides you with a general description of the securities we may offer. Each time we sell any securities under this prospectus, we will provide a prospectus supplement that will contain more specific information about the terms of those securities. We may also add, update or change in the prospectus supplement any of the information contained in this prospectus. This prospectus, together with the applicable prospectus supplements and the documents incorporated by reference into this prospectus, includes all material information relating to this offering. Please carefully read both this prospectus and any prospectus supplement together with the additional information described below under Where You Can Find More Information before buying securities in this offering.

You should rely only on the information contained or incorporated by reference in this prospectus or a prospectus supplement. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus or any prospectus supplement, as well as information we have previously filed with the SEC and incorporated by reference, is accurate as of the date on the front of those documents only. Our business, financial condition, results of operations and prospectus may have changed since those dates. **This prospectus may not be used to consummate a sale of our securities unless it is accompanied by a prospectus supplement.**

This prospectus contains and incorporates by reference market data, industry statistics and other data that have been obtained from, or compiled from, information made available by third parties. We have not independently verified their data.

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 our common stock. 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 novel 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.

On December 21, 2007, we completed our acquisition of the U.S. development, sales and marketing rights to the radiopharmaceutical product Zevalin® (Ibritumomab Tiuxetan), or Zevalin, from Biogen Idec Inc., or Biogen, pursuant to an Asset Purchase Agreement. Zevalin was the first radioimmunotherapy approved by the U.S. Food and Drug Administration, or FDA. It was approved in 2002 to treat patients with relapsed or refractory low-grade, follicular, or B-cell non-Hodgkin's lymphoma, or NHL. The assets acquired included the Zevalin FDA registration, FDA dossier, U.S. trademark, trade name and trade dress, customer list, certain patents and the assignment of numerous contracts. Additionally, we entered into a seventy-eight month supply agreement with Biogen to manufacture Zevalin for sale in the United States as well as a security agreement providing Biogen a first priority security interest in the assets purchased in the transaction. We made an upfront payment to Biogen of \$10.1 million at the time of closing and are also responsible for up to \$20 million in contingent milestone payments based on positive trial outcomes and FDA approval for label expansion. We are also obligated to make additional royalty payments based on net sales of Zevalin.

On July 31, 2007, we completed our acquisition of Systems Medicine, Inc., or SM, a privately held oncology company, in a stock for stock merger, valued at \$20 million. SM 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. Under the agreement, SM became Systems Medicine LLC and operates as a wholly owned subsidiary of CTI. SM 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 200 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. SM also has a strategic affiliation with the Translational Genomics Research Institute, or TGen, and has 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.

We are developing paclitaxel poliglumex, which we have previously referred to as XYOTAX, for the treatment of non-small cell lung cancer, or NSCLC, and ovarian cancer. Based on feedback related to our European marketing application submission, we intend to rebrand XYOTAX and therefore now refer to it by its generic name, paclitaxel poliglumex. As announced in March and May 2005, our STELLAR 2, 3, and 4 phase III clinical studies for paclitaxel poliglumex did not meet their primary endpoints of superior overall survival. However, we believe that the reduction in toxicities coupled with superior convenience and less medical resource utilization 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 patients with PS2 NSCLC. On March 4, 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 noninferiority 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 will be formally reviewed for validation by the end of March. Upon validation, the marketing approval review process begins, which generally takes 15 to 18 months.

We are also developing paclitaxel poliglumex for women with pre-menopausal levels of estrogen who have advanced NSCLC with normal or poor performance status. The basis for this clinical study was in part related to a pooled analysis of STELLAR 3 and 4 phase III trials for treatment of first-line NSCLC patients who have PS2, which we believe demonstrates a statistically significant survival advantage among women receiving paclitaxel poliglumex when compared to women or men

Table of Contents

receiving standard chemotherapy. A survival advantage for women over men was also demonstrated in a first-line phase II clinical trial of paclitaxel poliglumex 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 paclitaxel poliglumex as first-line monotherapy in PS2 women with NSCLC. In December 2006, we agreed with the recommendation of the Data Safety Monitoring Board to close the PIONEER lung cancer clinical trial 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 trials, known as PGT306 and PGT307, focus exclusively on NSCLC in women with pre-menopausal estrogen levels, the subset of patients where paclitaxel poliglumex demonstrated the greatest potential survival advantage in the STELLAR trials. 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. 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 paclitaxel poliglumex 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 a new drug application, or 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 GOG212 trial of paclitaxel poliglumex for first-line maintenance therapy in ovarian cancer are reported.

We are also developing paclitaxel poliglumex 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 is under the control of the Gynecologic Oncology Group and is expected to enroll 1,100 patients by 2010. A potential interim analysis, based on the number of events in the database, is planned for 2009, and if successful could lead to an NDA filing in 2010.

We are developing pixantrone, a novel anthracycline derivative, for the treatment of NHL. An interim analysis of our ongoing phase III study of pixantrone, known as the EXTEND or PIX301 study, was performed by the independent Data Monitoring Committee in the third quarter of 2006. Based on their review, the study continued. In September 2007, we announced that we reduced the enrollment target and decided to conduct a full analysis of the EXTEND trial, instead of an interim analysis as previously planned. In March 2008, we completed enrollment of approximately 140 patients in the EXTEND trial, 97 of which are currently evaluable according to Histological Intent to Treat, or HITT, criteria. An analysis of the data is expected in the second half of 2008 and, if final study results are adequate, we could submit an NDA with the FDA in early 2009 with potential approval in the second half of 2009. The FDA agreed that randomized safety data from the RAPID study (CHOP-R vs. CPOP-R) could be used to support the EXTEND results in an NDA submission for pixantrone. The RAPID, or PIX203, study is a phase II study in which pixantrone is substituted for doxorubicin in the CHOP-R regimen compared to the standard CHOP-R regimen in patients with previously untreated diffuse large B-cell lymphoma. An interim analysis of the RAPID study was reported in July 2007. The interim analysis of the study 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 reductions in the incidence of severe heart damage, infections, and thrombocytopenia (a reduction in platelets in the blood) as well as significant reduction in febrile neutropenia. Three deaths occurred in the pixantrone arm versus none in the control arm. Based on subsequent follow-up, we believe this discrepancy is probably due to the early nature of the data. 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 also 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 the Company's 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 brostallicin, which is a small molecule, anti-cancer drug with a novel, unique mechanism of action and composition of matter patent coverage, through our wholly owned subsidiary, SM. Data in more than 200 patients treated with brostallicin in phase I/II clinical trials reveal evidence of activity in patients with refractory cancer and patient/physician-friendly dosage and administration. A phase II study of brostallicin in relapsed/refractory soft tissue sarcoma met its pre-defined 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. Additionally, we initiated a phase II myxoid liposarcoma trial in 2007. Brostallicin also has demonstrated synergy with new targeted agents as well as established treatments in preclinical trials; consequently, we have begun a multi-arm combination study with brostallicin and other agents, including Avastin. This

Table of Contents

study is being conducted in conjunction with U.S. Oncology at multiple sites in the United States with the first combinations expected to be completed in 2008.

We are developing Zevalin for additional indications. Zevalin is a form of cancer therapy called radioimmunotherapy and is indicated for the treatment of patients with relapsed or refractory low-grade, follicular, or B-cell NHL, including patients with Rituximab-refractory follicular NHL. It was approved by the FDA in February 2002 as the first radioimmunotherapeutic agent for the treatment of NHL. At the American Society of Hematology meeting in December 2007, Bayer Schering, which holds the rights to Zevalin outside of the United States, published the results of their Phase III first-line indolent trial of Zevalin, known as the FIT trial. In March 2008, Bayer Schering received a positive opinion from the European Committee for Medicinal Products for Human Use, or CHMP, recommending Zevalin as consolidation therapy after remission induction in previously untreated patients with follicular lymphoma in Europe. Upon a favorable review by the European Commission, Bayer Schering could receive marketing authorization for this indication of Zevalin later this year. While we do not currently have any rights to use or access the data from the FIT trial, we intend to negotiate with Bayer Schering for access to those results. If we are successful in obtaining access to the FIT trial results and the data is suitable for FDA filing, we plan to submit a supplemental biologics license application, or sBLA, for Zevalin consolidation of first remission in advanced stage follicular lymphoma in the second half of 2008. We also intend to file an sBLA to remove the requirement for a biodistribution scan from the Zevalin label in 2008.

We are currently focusing our efforts on Zevalin, paclitaxel poliglumex, pixantrone, and brostallicin, and have no immediate plans to conduct any further clinical studies on CT-2106, polyglutamate camptothecin, or any other early-stage drug candidates.

CTI and XYOTAX are our proprietary marks, and we also own the U.S. rights to the mark Zevalin. All other product names, trademarks and trade names referred to in this Form 10-K are the property of their respective owners.

As of December 31, 2007, we had incurred aggregate net losses of approximately \$1.1 billion since inception. We expect to continue to incur additional operating losses for at least the next couple of years.

Recent Developments

Debt Restructuring

We have a substantial amount of debt outstanding, and our annual interest expense with respect to our debt is significant. We recently completed partial restructurings of our 2008 convertible notes in December 2007 and February 2008, which retired a portion of such debt, extended the maturity date on a portion of such debt to 2011 and involved the issuance of additional shares of common stock to holders of the exchanged notes. However, approximately \$10.7 million of such 2008 convertible notes remain outstanding and are due on June 15, 2008. We may consider additional alternatives to satisfy our obligations on the remaining outstanding 2008 convertible notes.

On January 30, 2008, we announced a plan to refocus our resources on late-stage and marketed products, which involve increasing sales of Zevalin in the United States and preparing the marketing applications for XYOTAX and pixantrone described above, while advancing the clinical development of brostallicin. This plan is intended to reduce operating expenses throughout the company by approximately 35% and reduce the company's projected net cash operating expenses to a forecasted \$77 million in 2008. As part of these refocusing efforts, approximately 30 of our U.S. employees were terminated.

As of December 31, 2007 we had cash and cash equivalents, securities available-for-sale and interest receivable of approximately \$18.4 million, and total current liabilities of \$53.5 million. We currently forecast net cash operating expenses of approximately \$77 million in 2008. As a result, we will need to continue to raise additional capital to fund our operations in 2008 and beyond. See Risk Factors.

Recent Financings

In December 2007, we sold 6,500 shares of our Series D 7% Convertible Preferred Stock and warrants to purchase 1,244,016 shares of our common stock to institutional investors for aggregate gross proceeds of \$6.5 million. In addition, we also sold 3,469,999 shares of common stock and warrants to purchase an additional 3,469,999 shares of common stock at \$2.02 per share in a registered offering in December 2007 to institutional investors for aggregate gross proceeds of approximately \$7.0 million.

In January 2008, we sold 800,000 shares of our common stock to Société Générale under the Step-Up Equity Financing Agreement we have in place with Société Générale. The 800,000 shares of common stock were sold at a price of \$1.07, or approximately \$1.59, per share, which raised \$1,272,000 (less \$56,000) in aggregate gross proceeds.

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

On March 3, 2008 we issued approximately \$51.7 million of our 9% convertible senior notes due 2012 plus warrants to purchase 7,326,950 shares of our common stock at an exercise price of \$1.41 per share. The notes will bear interest at an annual rate of 9% and be convertible into our common stock at an initial rate of approximately 709.22 shares per \$1,000 principal amount of the notes, which is equivalent to an initial conversion price of approximately \$1.41. Upon conversion of the notes, we will be required to pay a make-whole amount to the holders of the converted notes equal to \$270 per \$1,000 principal amount of the converted notes less any interest paid on such notes prior to the conversion date, or make-whole payment. An amount adequate to pay the make-whole payments on all outstanding notes will be held in escrow for a period of one year. As of March 19, 2008, \$28.8 million of these notes had been converted.

In connection with this debt issuance, certain existing holders of our series A, B, C, and D convertible preferred stock converted their shares of preferred stock into common stock. These conversions included 6,300, 10,162, 2,000 and 3,000 shares of series A, B, C and D convertible preferred stock, respectively. To induce these conversions, we paid an aggregate cash payment of approximately \$16.2 million.

Table of Contents

Recent Legal Proceedings

Based on language (the "Disputed Language") contained in the Articles of Amendment to the Company's Articles of Incorporation (the "Amendments") filed in connection with the issuance of the Company's Series A, Series B and Series C Convertible Preferred Stock (the "Preferred Stock"), certain holders thereof (the "Shareholders") asserted a right to consent (or not) to the transactions contemplated by the Exchange Agreements entered into by the Company and certain holders of its then existing convertible debt on December 12, 2007 (the "Exchange"). The Company is of the view that inclusion of the Disputed Language in the Amendments constitutes a scrivener's error without legal force or effect, and filed Articles of Correction with the Secretary of State of Washington in accordance with Section 23B.01.240 of the Revised Code of Washington. On January 2, 2008, Tang Capital Partners LP ("Tang") filed a civil action in the United States District Court for the Southern District of New York in which Tang alleged that the Company breached a Securities Purchase Agreement, executed on or about April 16, 2007 in connection with the issuance of Series B Preferred Stock. Tang alleges that the Company's filing of Articles of Correction to the Articles of Amendment to the Amended and Restated Articles of Incorporation on or around December 11, 2007 materially and adversely altered the powers, preferences or rights conferred through its Securities Purchase Agreement, thereby constituting a Triggering Event, and as a result, Tang is entitled to redemption of its Preferred Stock in consideration for 130% of its Stated Value, plus other available relief, if any. One other holder of Preferred Stock, Enable Capital Management LLC, asserted similar claims in correspondence with the Company in December 2007 and in January 2008 subsequently filed a lawsuit with similar claims to the Tang action. At this time, we are not able to make a determination whether the likelihood of an unfavorable outcome is probable or remote.

Other Information

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. Our website can be found at www.CellTherapeutics.com. Information contained in, or accessible through, our website does not constitute a part of this prospectus supplement.

Table of Contents

The Securities We May Offer

We may offer shares of our common stock, preferred stock and various series of debt securities and warrants to purchase such securities with a total value of up to \$150 million from time to time under this prospectus at prices and on terms to be determined by market conditions at the time of offering. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities, we will provide a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities, including, to the extent applicable:

designation or classification;

aggregate principal amount or aggregate offering price;

maturity;

original issue discount, if any;

rates and times of payment of interest, dividends or other payments, if any;

redemption, conversion, exchange, settlement or sinking fund terms, if any;

conversion, exchange or settlement prices or rates, if any, and, if applicable, any provisions for changes to or adjustments in the conversion, exchange or settlement prices or rates and in the securities or other property receivable upon conversion, exchange or settlement;

ranking;

restrictive covenants, if any;

voting or other rights, if any; and

important federal income tax considerations.

The prospectus supplement also may add, update or change information contained in this prospectus or in documents we have incorporated by reference into this prospectus.

This prospectus may not be used to consummate sales of offered securities unless accompanied by a prospectus supplement.

We may sell the securities directly to or through underwriters, dealers or agents. We, and our underwriters or agents, reserve the right to accept or reject all or part of any proposed purchase of securities. If we do offer securities through underwriters or agents, we will include in the applicable prospectus supplement:

the names of those underwriters or agents;

applicable fees, discounts and commissions to be paid to them;

details regarding over-allotment options, if any; and

the net proceeds to us.

Common Stock. We may issue shares of our common stock from time to time. Each holder of common stock is entitled to one vote for each share held on all other 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. 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.

Preferred Stock. We may issue shares of our preferred stock from time to time. The board of directors has the authority, without action by the shareholders, to designate and issue up to 10,000,000 shares of 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. We issued 20,000 shares of our Series A 3% convertible preferred stock in February 2007, 37,200 shares of our Series B 3% convertible preferred stock in April 2007, 20,250 shares of our Series C 3% convertible preferred stock in July 2007, and 6,500 shares of our Series D 7% convertible preferred stock in December 2007. As of March 25, 2008, 550 shares of our Series A

Table of Contents

3% convertible preferred were outstanding, 5,218 shares of our Series B 3% convertible preferred stock were outstanding, 6,284 shares of our Series C 3% convertible preferred stock were outstanding and 1,000 shares of our Series D 7% convertible preferred stock were outstanding.

We will fix the rights, preferences and privileges of the preferred stock of each series that we sell under this prospectus and applicable prospectus supplements in the certificate of designation relating to that series. We will incorporate by reference into the registration statement of which this prospectus is a part the form of any certificate of designation that describes the terms of the series of preferred stock that we are offering before the issuance of the related series of preferred stock. We urge you to read the prospectus supplements related to the series of preferred stock being offered, as well as the complete certificate of designation that contains the terms of the applicable series of preferred stock.

Debt Securities. We may issue debt securities from time to time, in one or more series, as either senior or subordinated debt or as senior or subordinated convertible debt. The senior debt securities will rank equally with any other unsubordinated debt that we may have and may be secured or unsecured. The subordinated debt securities will be subordinate and junior in right of payment, to the extent and in the manner described in the instrument governing the debt, to all or some portion of our indebtedness. Any convertible debt securities that we issue will be convertible into or exchangeable for our common stock or other securities of ours. Conversion may be mandatory or at your option and would be at prescribed conversion rates.

The debt securities will be issued under one or more documents called indentures, which are contracts between us and a trustee for the holders of the debt securities. In this prospectus, we have summarized certain general features of the debt securities. We urge you, however, to read the prospectus supplements related to the series of debt securities being offered, as well as the complete indentures that contain the terms of the debt securities. Indentures have been filed as exhibits to the registration statement of which this prospectus is a part, and supplemental indentures and forms of debt securities containing the terms of debt securities being offered will be incorporated by reference into the registration statement of which this prospectus is a part from reports we file with the Securities and Exchange Commission.

Warrants. We may issue warrants for the purchase of common stock, preferred stock and/or debt securities in one or more series, from time to time. We may issue warrants independently or together with common stock, preferred stock and/or debt securities, and the warrants may be attached to or separate from those securities.

The warrants will be evidenced by a warrant certificate issued under one or more warrant agreements, which are contracts between us and an agent for the holders of the warrants. In this prospectus, we have summarized certain general features of the warrants. We urge you, however, to read the prospectus supplements related to the series of warrants being offered, as well as the complete warrant agreements and warrant certificates that contain the terms of the warrants. Forms of warrant agreements and warrants certificates relating to warrants for the purchase of common stock, preferred stock and debt securities have been filed as exhibits to the registration statement of which this prospectus is a part, and complete warrant agreements and warrant certificates containing the terms of warrants being offered will be incorporated by reference into the registration statement of which this prospectus is a part from reports we file with the Securities and Exchange Commission.

Financial Ratios

Our ratio of earnings to fixed charges for each of the periods indicated is as follows:

	Year Ended December 31,				
	2003	2004	2005	2006	2007
Ratio of earnings to fixed charges(1)					

- (1) For the purposes of computing ratio of earnings to 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, 2003, 2004, 2005, 2006 and 2007, were insufficient to cover fixed charges by \$130,031, \$252,298, \$102,505, \$135,819 and \$148,305 (in thousands) respectively. For this reason, no ratios are provided for these periods.

Table of Contents

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 projections of earnings, revenues or other financial items;

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

any statements concerning proposed new products or services;

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;

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 *may*, *will*, *expects*, *plans*, *anticipates*, *estimates*, *potential*, or *continue* or the negative thereof or other comparable terminology. There can be no assurance that such expectations or any of the forward-looking statements will prove to be correct, and actual results could differ materially from these projected or assumed in the forward-looking statements. Our future financial condition and results of operations, as well as any forward-looking statements, are subject to inherent risks and uncertainties, including, but not limited to, the risk factors set forth in this prospectus. All forward-looking statements and reasons why results may differ included in this prospectus are made as of the date hereof, and we do not intend to update any such forward-looking statement or reason why actual results might differ.

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 supplement 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 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, 2007, we had an accumulated deficit of approximately \$1.1 billion. We are pursuing regulatory approval for paclitaxel poliglumex, pixantrone, brostallicin and plan to seek regulatory approval for the expansion of approved uses of Zevalin. We will need to conduct research, development, testing and regulatory compliance

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

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. We have a single drug we are marketing, Zevalin, and the net proceeds of sales of this drug are not sufficient to pay our debt and operating expenses on a current basis. We do not currently project that net revenues from sales of any of our products will be sufficient to cover our existing debt and operating expenses within the next twelve months. Unless we raise substantial additional capital, we will not be able to repay this debt or the interest, liquidated damages or other payments that may become due with respect to our debt. Approximately \$10.7 million of this debt is due in June 2008. Prior to this debt becoming due, we may engage in one or more restructuring transactions which could involve, among other things, an effective increase in interest rates, alteration of terms or exchanges involving the issuance of additional shares of common stock or other arrangements which may dilute or be adverse to the value of our common stock and preferred stock.

Table of Contents

We need to raise additional funds immediately 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.

In 2007, we were able to raise capital through the sale of preferred stock and common stock, and raised a total of \$91.0 million in gross proceeds, with an additional \$1.3 million in gross proceeds raised from an equity offering under our Step-Up Equity Financing Agreement with Société Générale in January 2008 and approximately \$35.5 million in proceeds from a convertible debt offering, net of inducement payments for conversions of convertible preferred stock, in March 2008. In addition, approximately \$13.9 million of this amount is restricted and is being held in escrow to fund potential make-whole payments due upon conversions of this debt. However, we have substantial operating expenses associated with the development of our product candidates and as of December 31, 2007 we had cash and cash equivalents, securities available-for-sale and interest receivable of approximately \$18.4 million, and total current liabilities of approximately \$53.5 million. We also have a substantial amount of debt outstanding, including an aggregate of approximately \$152.5 million in convertible notes as of March 19, 2008, of which \$10.7 million is due in June 2008. Furthermore, as a result of our preferred stock financings in 2007, we may be obligated to redeem such preferred stock starting in February 2009. We expect that our existing cash and cash equivalents, securities available-for-sale and interest receivable, including proceeds received from our offerings through March 15, 2008, will not provide sufficient working capital to fund our presently anticipated operations for the next 12 months and repay our notes due in June 2008, and we will therefore need to raise additional capital.

We have a \$60 million (approximately \$88 million as of December 31, 2007) Step-Up Equity Financing Agreement with Société Générale which we may be able to utilize to provide additional equity funding. As of March 19, 2008 we had approximately \$59.1 million available under this financing agreement. Additionally, we may 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, including any obtained under the Financing Agreement, 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 paclitaxel poliglumex, pixantrone, brostallicin, expanded uses of Zevalin and other products we may be developing. 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. 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.

We have received a going concern opinion 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 report on our December 31, 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 may be unable to obtain a quorum for meetings of our shareholders and therefore be unable to take certain corporate actions.

Our bylaws require that a quorum, consisting of a majority 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. A substantial number 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, 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 will 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 the Company's articles of incorporation to increase authorized shares that are to be used for general corporate purposes, and the ratification of our auditors, in the event that the broker receives no voting instruction from the beneficial owner. As a result of this custody transfer, we were able to hold a special meeting of the shareholders in April 2007, an annual meeting of the shareholders in September 2007 and another special meeting of the shareholders in January 2008. However, obtaining a quorum at future meetings depends 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

Table of Contents

participate in custody transfer arrangements in the future. We are continuing to explore other alternatives to achieve quorum for 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. 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 the Company. 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, such failure could have a materially adverse effect on the Company.

We could fail in financing efforts 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 the securities 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.

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 the Commissione Nazionale per le Società e la Borsa, or 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. 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 year. We filed our initial listing prospectus with CONSOB in April 2007 and worked 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. We continue to pursue the possibility of publishing a listing prospectus to cover other financing efforts under Italian law, however, at the present time we have not been successful in getting approval from the Italian regulators for such a 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.

In 2006, we identified material weaknesses in our internal control over financial reporting and we received an adverse opinion on internal control over financial reporting from our independent registered public accounting firm in connection with their annual internal control attestation process for fiscal year 2006.

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 the company's 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 the following material weaknesses relative to the effectiveness of our internal control over financial reporting:

We did not maintain an effective review and approval process in our European subsidiary, or CTI (Europe), to ensure the accuracy of accounts payable and accrued expenses for certain activities shared by headquarters and CTI (Europe) in conformity with generally

accepted accounting principles.

Table of Contents

We did not maintain effective internal controls related to the financial reporting process to detect errors that are not identified by the process level controls in CTI (Europe).

During 2007, to remedy the material weaknesses in our internal control over financial reporting, we implemented enhanced review and approval procedures that are designed to help ensure we accurately record accounts payable and accrued expense balances in CTI (Europe), and trained personnel in key finance positions in CTI (Europe) regarding the enhanced procedures and appropriate levels of oversight and review.

In November 2007, we merged CTI (Europe) with and into CTI in a roll-up merger under Washington law. As a result, all of our operations in Italy are now directly part of CTI and CTI (Europe) is now a branch of the Company.

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.

If we are not able to successfully identify and complete valuable acquisition opportunities, we may not achieve the anticipated growth we would otherwise achieve were such acquisitions accomplished.

We have in the past and may in the future seek to further expand our product portfolio through acquisitions of other complementary businesses or technologies or marketed products. For example, in July 2007, we acquired SM, a privately held oncology company, and gained worldwide rights to brostallicin, a DNA minor groove binding agent with proven anti-tumor activity which is currently in phase II clinical studies. Additionally, in December 2007, we acquired Zevalin from Biogen Idec, or Biogen, for development, marketing and sale in the United States. Mergers and acquisitions are inherently risky, and we cannot assure that we will be able to complete future acquisitions, or that our acquisitions will be successful. The successful execution of our acquisition strategy will depend, in part, on our ability to identify, negotiate, complete and integrate such acquisitions and, if necessary, obtain satisfactory debt or equity financing to fund those acquisitions. Failure to manage and successfully integrate acquired businesses could harm our business.

If we are not able to successfully integrate recent and future acquisitions, our management's attention could be diverted, and efforts to integrate future acquisitions could consume significant resources.

The acquisitions of SM and of Zevalin or any other future acquisition that we may undertake, involve numerous risks related to the integration of the acquired asset or entity into the Company after the acquisition is completed. These risks include the following:

difficulties in integrating the operations, technologies, and products of the acquired companies;

difficulties in implementing internal controls over financial reporting;

diversion of management's attention from normal daily operations of the business;

inability to maintain the key business relationships and the reputations of acquired businesses;

entry into markets in which we have limited or no prior experience and in which competitors have stronger market positions;

dependence on unfamiliar affiliates and partners;

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

reduction in the development or commercialization of existing products due to increased focus on the development or commercialization of the acquired products;

responsibility for the liabilities of acquired businesses;

inability to maintain our internal standards, controls, procedures and policies at the acquired companies or businesses; and

potential loss of key employees of the acquired companies.

Table of Contents

In addition, if we finance or otherwise complete acquisitions by issuing equity or convertible debt securities, our existing shareholders may be diluted.

If we are unable to expand label usage of Zevalin, or maintain or obtain improved reimbursement rates, we may not recognize the full value of the asset and there may be adverse effects on our expected financial and operating results.

We intend to seek expansion of the approved uses, or labeled uses, of Zevalin in the United States. However, we may be unable to obtain approval for such label expansion in full or in part. If we are not able to obtain approval for expansion of the labeled uses for Zevalin, or if we are otherwise unable to fulfill our marketing, sales and distribution plans for Zevalin, we may not recognize the full anticipated value of Zevalin. If we do not expand the approved uses of Zevalin, we may have insufficient net revenues to finance our current levels of debt and operations unless we are able to market and sell other products. While we intend to negotiate with Bayer Schering for access to data from their first line indolent trial, or FIT trial, we currently have no rights to that data, and there is no assurance that Bayer Schering will agree to give us access to their data on reasonable terms or at all. In addition, even if we are able to use the data from Bayer Schering's FIT trial, there can be no guarantee that such data will be adequate or suitable for submission to the FDA in support of a supplemental biologics license application for additional approved uses of Zevalin, or that the FDA will approve such supplemental biologics license application.

In 2007, the Centers for Medicare and Medicaid Services, or CMS, implemented new outpatient reimbursement rates to be put in place in 2008 for radiopharmaceuticals, including Zevalin. These new rates are below the acquisition costs of Zevalin. Although Congress passed legislation in late 2007 to delay the implementation of those new rates and stabilize reimbursement rates for the first six months of 2008 with the intention of giving drug manufacturers and CMS more time to reach an agreement that more adequately reflects hospitals' costs associated with the therapy, there can be no guarantee that CMS will agree to a rate or methodology that provides an acceptable reimbursement on radiopharmaceuticals such as Zevalin. In the event that CMS does not agree to a reimbursement rate that is adequate to cover the acquisition costs of Zevalin, we may face immediate and significant difficulty in getting care providers to use Zevalin, which would have an adverse impact on our expected financial and operating results.

We may face difficulties in achieving broader market acceptance of Zevalin if we do not invest significantly in our sales and marketing infrastructure.

We currently market Zevalin using a direct sales force that we recently hired in connection with our acquisition of Zevalin from Biogen. U.S. sales of Zevalin by its prior owner either declined or remained flat over the past several years and we expect such sales to remain flat in 2008. We believe that our sales and marketing strategy, in conjunction with our efforts to obtain approval by the FDA for expanded uses of Zevalin, will increase sales of and revenue from Zevalin over the next few years. Our sales and marketing strategy intends to take advantage of the recent lowering of barriers to adoption, including greater economic incentives and practice efficiencies for Zevalin compared to rituximab, the recent adoption of positron emission tomography in community oncology practices, which facilitates use of Zevalin, and implementation of a Zevalin community access program, which targets facilitation of on-site ordering, receipt, and administration of Zevalin by the 100 largest community oncology group practices. However, implementation of the sales and marketing strategy will require an investment of resources and may not increase Zevalin revenues according to our forecasts. In addition, creation and expansion of an effective sales force may take time, and competition for sales and marketing personnel in our industry is intense. Therefore, we will need to effectively manage and expand our sales force, hire individuals with additional technical expertise, expand our distribution capacity or otherwise grow our sales and marketing infrastructure in order to achieve broader market acceptance and additional sales revenue from Zevalin. In addition to the factors just listed, if we do not effectively manage our sales force, our financial condition and operating results may suffer.

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 paclitaxel poliglumex and pixantrone with Novartis International Pharmaceutical Ltd., or Novartis, pursuant to which Novartis received an exclusive worldwide license for the development and commercialization of paclitaxel poliglumex 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 elects to participate in the development and commercialization of paclitaxel poliglumex or if Novartis exercises its option related to pixantrone and we are able to reach a definitive agreement. 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. We may never receive the necessary regulatory approvals and our products may not reach the necessary sales levels.

Table of Contents

We may be delayed, limited or precluded from obtaining regulatory approval of paclitaxel poliglumex 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, market, or expand the marketing of 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 large part on obtaining regulatory approval of paclitaxel poliglumex. 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 paclitaxel poliglumex 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. We have decided not to initiate an additional study, the PGT306 trial, for which we have submitted a special protocol assessment, or SPA, to conserve limited financial resources. 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 paclitaxel poliglumex 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 paclitaxel poliglumex 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 paclitaxel poliglumex in the United States.

Based on discussions with the EMEA Scientific Advice Working Party, we submitted an MAA in Europe on March 4, 2008 based on results of the STELLAR trials, 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 will be presented in the MAA.

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. With the exception of Zevalin, none of our current products have received approval. 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. 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.

Our marketed products, such as Zevalin, are and will be subject to extensive regulations regarding their promotion and commercialization. For instance, we are subject to numerous regulations and statutes regulating the manner of selling and obtaining reimbursement for our products that receive marketing approval. 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 our sales force is relatively new, 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

Table of Contents

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, a commercially approved drug, we also entered into a corporate integrity agreement with the HHS-OIG that requires us to establish a compliance committee and compliance program and adopt a formal code of conduct. The USAO settlement does not address separate claims brought against the Company by the private party plaintiff in this matter, which generally relate to attorney's fees and employment related claims. In 2007, the United States District Court dismissed the private party plaintiff's employment claims as barred by applicable statutes of limitation, and the private party plaintiff has advised us that he intends to seek a court order awarding approximately \$1 million in attorneys' fees. We are not able to reasonably estimate the potential cost of any award that may be made pursuant to this claim.

We rely on third parties for the manufacture and supply of Zevalin and for the manufacture and supply of radioactive isotopes used in the administration of Zevalin.

We currently rely on Biogen to manufacture and supply Zevalin to us through a long-term manufacturing agreement, and Biogen may, in turn, rely on other third-party manufacturers to fill its requirements for manufacturing Zevalin. If Biogen or any third party contract manufacturing organization, or CMO, or contract service provider, or CSP, upon which it relies does not produce or test and release Zevalin in sufficient quantities and on a timely and cost-effective basis, or if Biogen or any third party CMO or CSP does not obtain and maintain all required manufacturing approvals, our business could be harmed. In addition, we rely on MDS (Canada) for the manufacture and supply of Yttrium-90, a radioactive isotope used in the administration of Zevalin therapy. MDS (Canada) is currently our sole source of Yttrium-90, which must be manufactured and shipped in such a way as to ensure the appropriate potency of the isotope based on its radioactive half-life at the time of administration to the patient is valid. If MDS (Canada) were to have problems with the manufacture or supply of Yttrium-90, our business could be materially impacted, and we may not be able to find an additional supplier of the isotope on acceptable terms or at all. We also rely on Malinckrodt and GE for the manufacture and supply of Indium-111, a radioactive isotope used in the administration of Zevalin diagnostic for clinical purposes. Malinckrodt and GE are currently our two qualified sources of Indium-111, which must be manufactured and shipped in such a way as to ensure the appropriate potency of the isotope based on its radioactive half-life at the time of administration of the diagnostic dose to the patient. If both companies were to have problems with the manufacture or supply of Indium-111, our business could be materially impacted, and we may not be able to find an additional supplier of the isotope on acceptable terms or at all.

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:

Zevalin currently competes with Bexxar®, which is marketed by GlaxoSmithKline, and any rituximab-containing chemotherapy regimen. Rituximab is marketed in the U.S. by Genentech and Biogen Idec. In addition, other companies such as Cephalon, Eli Lilly, Genta, Genmab, Favril, and Genitope are developing products which could compete with Zevalin.

If we are successful in bringing paclitaxel poliglumex to market, we will face direct competition from oncology-focused multinational corporations. Paclitaxel poliglumex 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 and OSI Pharmaceuticals, which markets Tarceva; Genentech, which markets Avastin; Eli Lilly, which markets 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 paclitaxel poliglumex.

Table of Contents

Because pixantrone is intended to provide less toxic treatment to patients who have failed standard chemotherapy treatment, if pixantrone is brought 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 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. As discussed above, CMS proposed new rates for 2008 for Zevalin that, if implemented, would result in reimbursement rates below our acquisition cost of Zevalin. 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.

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

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, with the exception of Zevalin, currently are in research or development, and have not received marketing approval.

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:

Table of Contents

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.

The intellectual property and assets related to Zevalin are subject to a security agreement with Biogen; if we were to default on certain payments or reimbursement owed to Biogen or certain third parties, those assets would be subject to foreclosure by Biogen and we could lose our ability to continue development, sales and marketing activities with respect to Zevalin.

On December 21, 2007, in connection with our purchase of Zevalin, we entered into a Security Agreement with Biogen granting a first priority security interest to Biogen in all of our right, title and interest (a) in and to the assets related to Zevalin that we purchased from Biogen, together with any other assets or rights related to any of such assets or otherwise used in the development, manufacture or commercialization of Zevalin, and (b) under certain license, sublicense and supply agreements entered into in connection with our purchase of Zevalin. In the event we were to default on certain of our obligations under the Security Agreement, the Asset Purchase Agreement pursuant to which we continue to owe royalties and milestone payments to Biogen, or the related sublicense and service agreements, or in the event we were to make an application for, or consent to, the appointment of a receiver, trustee or liquidator of all or a substantial portion of our assets, transfer our assets as part of a general assignment or other arrangement for the benefit of creditors, become insolvent, file a voluntary or involuntary petition under the provisions of the United States Bankruptcy Code, or in the event of an attachment or execution upon, or seizure of, all or substantially all of our assets, Biogen may take any action with respect to the collateral under the Security Agreement that it deems necessary or advisable to accomplish the purposes of the Security Agreement. The Security Agreement will remain in effect until all obligations secured by that agreement have been satisfied. If Biogen were to foreclose on the collateral under this Security Agreement, it would have a material adverse impact on our business.

If any of our license agreements for intellectual property underlying Zevalin, paclitaxel poliglumex, pixantrone, brostallicin, or any other products are terminated, we may lose our rights to develop or market that product.

We have licensed intellectual property, including patent applications relating to intellectual property for pixantrone, brostallicin and Zevalin. We have also in-licensed the intellectual property for our drug delivery technology relating to paclitaxel poliglumex that 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 agreements, 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, paclitaxel poliglumex

Table of Contents

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, 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 but have not conducted an exhaustive search 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. We may not be able to successfully challenge the validity of these patents and could have 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 the raw materials necessary to produce our paclitaxel poliglumex 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 paclitaxel poliglumex, 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 a single source on a purchase order basis. 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 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.

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 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, paclitaxel poliglumex, has a

Table of Contents

complex manufacturing process, 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 finished products for pixantrone and brostallicin are both manufactured by a single vendor. The drug substance for Zevalin is produced under contract by Biogen and the drug product and finished product is manufactured and distributed at a contract manufacturer and contract distribution facility.

If we do not successfully develop additional 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. Our ability to generate significant revenues from Zevalin is dependent in part on our ability to find new markets for the product, including through gaining wider acceptance and use of the drug by physicians and through FDA approval of expanded uses for the product. There is no guarantee that we will be successful in accomplishing either of these goals. Paclitaxel poliglumex, pixantrone, brostallicin and label expansions for Zevalin are currently in clinical trials and may not be successful. For example, our STELLAR phase III clinical trials for paclitaxel poliglumex for the treatment of non-small cell lung cancer failed to meet their primary endpoints. 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 this and 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 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. Substantially all of our product candidates in clinical development are in-licensed from a third party, including Zevalin, paclitaxel poliglumex, pixantrone, 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.

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. On March 4, 2008, we submitted an MAA to the EMEA for paclitaxel poliglumex, however, we do not expect a regulatory decision on an MAA prior to the second half of 2009. Analysis of the data from our EXTEND trial is expected in the second half of 2008 and, if final study results are adequate, we could submit an NDA with the FDA in early 2009 with potential approval in the second half of 2009.

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 not be completed successfully within any specified time period by us, or without significant additional resources or expertise to those originally expected to be necessary. Many drugs in human clinical trials fail to demonstrate the desired safety and efficacy characteristics. Clinical testing may not show potential products to be safe and efficacious and potential products may not be approved for a specific indication. Further, 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. Data obtained from clinical trials are susceptible to varying interpretations. Government regulators and our collaborators may not agree with our interpretation of our clinical trial results. In addition, we or regulatory authorities may

Table of Contents

suspend clinical trials at any time on the basis that the participants are being exposed to unacceptable health risks or for other reasons. 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 or complete, need to perform more or larger clinical trials than planned or experience delays in any of our present or planned clinical trials, 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 paclitaxel poliglumex 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.

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;

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

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 novel 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

Table of Contents

in human clinical trials. Our product candidates may not be proven safe or effective. If these technologies do not work, our drug candidates may not develop into commercial products.

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 based 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;

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.

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, marketing and sale of human pharmaceutical products, and we may not be able to avoid significant product liability exposure. While we have insurance covering marketing and sales of Zevalin as well as 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 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

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

commercialization of Zevalin or any products we develop. A successful product liability claim in excess of our insurance coverage could exceed our net worth.

Adverse events related to our products can negatively impact our product sales and results from operations.

Our commercial product, Zevalin, has the possibility of causing significant side effects in patients, and deaths associated with an infusion reaction symptom complex, though rare, have occurred within 24 hours of infusions of rituximab, a component of Zevalin. In addition, Yttrium-90 Zevalin administration often results in severe and prolonged cytopenias in most patients, while severe cutaneous and mucocutaneous reactions have also been reported. While side effects are common in oncology drugs, adverse events such as these could negatively impact sales of Zevalin, which in turn could negatively impact our results from operations.

Table of Contents

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 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.

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

As a result of 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, a portion of our consolidated financial obligations will arise in euros. In addition, 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.

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 19, 2008, our stock price, as adjusted to reflect the one-for-four reverse stock split effected in April 2007, has ranged from a low of \$0.47 to a high of \$7.56. 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 2008 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;

Table of Contents

litigation and government proceedings;

adverse legislation, including changes in governmental regulation;

third-party reimbursement policies;

changes in securities analysts' recommendations;

changes in health care policies and practices;

economic and other external factors; and

general market conditions.

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 CTI and certain directors and officers of CTI and a derivative action lawsuit was filed against CTI's 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,

Our common stock is listed on the Nasdaq Global Market and we may not be able to maintain that listing, which may make it more difficult for investors to sell shares of our common stock.

Our common stock is listed on the Nasdaq Global Market. The Nasdaq Global Market has several quantitative and qualitative requirements companies must comply with to maintain this listing, including a \$1.00 minimum bid price per share and \$50 million minimum value of listed securities. As of March 20, 2008, our common stock had a closing bid price below \$1.00 for 13 consecutive days. If our closing bid price remains below \$1.00 for 30 consecutive days, under the current Nasdaq Global Market rules we will have a period of 180 days to attain compliance by again meeting the \$1.00 minimum bid price. We would then have the option to transfer to the Nasdaq Capital Market, assuming we meet all other initial listing qualifications for the Nasdaq Capital Market, where we can receive an additional 180 days to regain compliance. If we are unable to attain compliance with the minimum bid price we may be delisted. In addition, if we fail to maintain the minimum value of listed securities, we may have to transfer to the Nasdaq Capital Market or may be delisted. The level of trading activity of our common stock may decline if it is no longer listed on the Nasdaq Global Market or Nasdaq Capital Market. Furthermore, our failure to maintain a listing on the Nasdaq market may constitute an event of default under certain of our indebtedness which would accelerate the maturity date of such date. As such, if our common stock ceases to be listed for trading on the Nasdaq Global Market or Nasdaq Capital Market for any reason, it may harm our stock price, increase the volatility of our stock price and make it more difficult for investors to sell shares of our common stock.

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.

Table of Contents

These provisions, alone or together, could have the effect of deterring or delaying changes in incumbent management, proxy contests or changes in control.

USE OF PROCEEDS

We will retain broad discretion over the use of the net proceeds from the sale of our securities offered hereby. Except as described in any prospectus supplement, we currently anticipate using the net proceeds from the sale of our securities hereby primarily for clinical development of drug candidates, as well as commercialization activities and general corporate purposes, including working capital and research expenses. In addition, we may use some of the net proceeds to hire additional personnel. The amounts and timing of the expenditures may vary significantly depending on numerous factors, such as the progress of our research and development efforts, technological advances and the competitive environment for our products. We also might use a portion of the net proceeds to acquire or invest in complementary businesses, products and technologies.

Pending the use of the net proceeds, we intend to invest the net proceeds in short-term, interest-bearing, investment-grade securities.

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 restated articles of incorporation, as amended, and all applicable provisions of Washington law.

General

We are authorized to issue 200,000,000 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 25, 2008, there were 94,634,431 shares of common stock issued and outstanding. We also had 550 shares of our Series A 3% convertible preferred stock outstanding, 5,218 shares of our Series B 3% convertible preferred stock outstanding, 6,284 shares of our Series C 3% convertible preferred stock outstanding and 1,000 shares of our Series D 7% convertible preferred stock outstanding as of March 25, 2008.

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.

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; or

delaying or preventing a change in control of the company without further action by the shareholders.

As of March 25, 2008, 550 shares of our Series A 3% convertible preferred stock were outstanding, 5,218 shares of our Series B 3% convertible preferred stock were outstanding, 6,284 shares of our Series C 3% convertible preferred stock were outstanding and 1,000 shares of our Series D 7% convertible preferred stock were outstanding.

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.17 of the Washington Business Corporation Act (the WBCA) prohibits, subject to certain exceptions, a merger, sale of assets or liquidation of the company involving an interested shareholder (defined as a person or group of affiliated persons who own beneficially 20% or more of the company's voting securities) unless the transaction is determined to be at a fair price or otherwise approved by a majority of the

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

company's disinterested directors or is approved by holders of two-thirds of the company's outstanding voting securities, other than those held by the interested shareholder. A Washington corporation may, in its articles of incorporation, exempt itself from coverage of this provision, but the company has not done so. In addition, Chapter 23B.19 of the WBCA prohibits the company, 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 the company's voting securities without the prior approval of the company's 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 redemption of stock to or from, the acquiring person, or otherwise allowing the acquiring person to receive any disproportionate benefit as a shareholder. The company may not exempt itself 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

Table of Contents

meeting of 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 the company 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 the best interests of the company 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 the company. Further, our Amended and Restated Bylaws require a shareholder to provide notice to the company of such shareholder's intent 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 of shareholders or, in the case of an election to be held at a special meeting of 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 provisions may have the effect of deterring hostile takeovers or delaying change in control or management of our company.

Transfer Agent and Registrar

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

Table of Contents

DESCRIPTION OF DEBT SECURITIES

The following description, together with the additional information we include in any applicable prospectus supplements, summarizes the material terms and provisions of the debt securities that we may offer under this prospectus. While the terms we have summarized below will generally apply to any future debt securities we may offer under this prospectus, we will describe the particular terms of any debt securities that we may offer in more detail in the applicable prospectus supplement. The terms of any debt securities we offer under a prospectus supplement may differ from the terms we describe below.

We will issue the senior notes under the senior indenture which we will enter into with one or more trustees. We will issue the subordinated notes under the subordinated indenture which we will enter into with one or more trustees. We have filed forms of these documents as exhibits to the registration statement of which this prospectus is a part. We use the term *indentures* to refer to both the senior indenture and the subordinated indenture.

The indentures will be qualified under the Trust Indenture Act of 1939, as amended, or the Trust Indenture Act. We use the term *debenture trustee* to refer to either the senior trustee or the subordinated trustee, as applicable.

The following summaries of material provisions of the senior notes, the subordinated notes and the indentures are subject to, and qualified in their entirety by reference to, all the provisions of the indenture applicable to a particular series of debt securities. We urge you to read the applicable prospectus supplements related to the debt securities that we sell under this prospectus, as well as the complete indentures that contain the terms of the debt securities. Except as we may otherwise indicate, the terms of the senior indenture and the subordinated indenture are identical.

General

We will describe in the applicable prospectus supplement the terms relating to a series of debt securities, including:

the title;

the principal amount being offered, and, if a series, the total amount authorized and the total amount outstanding;

any limit on the amount that may be issued;

whether or not we will issue the series of debt securities in global form and, if so, the terms and who the depositary will be;

the maturity date;

the principal amount due at maturity, and whether the debt securities will be issued with any original issue discount;

whether and under what circumstances, if any, we will pay additional amounts on any debt securities held by a person who is not a United States person for tax purposes, and whether we can redeem the debt securities if we have to pay such additional amounts;

the annual interest rate, which may be fixed or variable, or the method for determining the rate, the date interest will begin to accrue, the dates interest will be payable and the regular record dates for interest payment dates or the method for determining such dates;

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

whether or not the debt securities will be secured or unsecured, and the terms of any secured debt;

the terms of the subordination of any series of subordinated debt;

the place where payments will be payable;

restrictions on transfer, sale or other assignment, if any;

our right, if any, to defer payment of interest and the maximum length of any such deferral period;

the date, if any, after which, the conditions upon which, and the price at which we may, at our option, redeem the series of debt securities pursuant to any optional or provisional redemption provisions, and any other applicable terms of those redemption provisions;

provisions for a sinking fund, purchase or other analogous fund, if any;

the date, if any, on which, and the price at which we are obligated, pursuant to any mandatory sinking fund or analogous fund provisions or otherwise, to redeem, or at the holder's option to purchase, the series of debt securities;

whether the indenture will restrict our ability and/or the ability of our subsidiaries to:

incur additional indebtedness;

Table of Contents

issue additional securities;

create liens;

pay dividends and make distributions in respect of our capital stock and the capital stock of our subsidiaries;

redeem capital stock;

place restrictions on our subsidiaries' ability to pay dividends, make distributions or transfer assets;

make investments or other restricted payments;

sell or otherwise dispose of assets;

enter into sale-leaseback transactions;

engage in transactions with stockholders and affiliates;

issue or sell stock of our subsidiaries; or

effect a consolidation or merger;

whether the indenture will require us to maintain any interest coverage, fixed charge, cash flow-based, asset-based or other financial ratios;

a discussion of any material or special United States federal income tax considerations applicable to the debt securities;

information describing any book-entry features;

the procedures for any auction and remarketing, if any;

the denominations in which we will issue the series of debt securities, if other than denominations of \$1,000 and any integral multiple thereof;

if other than dollars, the currency in which the series of debt securities will be denominated; and

any other specific terms, preferences, rights or limitations of, or restrictions on, the debt securities, including any events of default that are in addition to those described in this prospectus or any covenants provided with respect to the debt securities that are in addition to those described above, and any terms which may be required by us or advisable under applicable laws or regulations or advisable in connection with the marketing of the debt securities.

Conversion or Exchange Rights

We will set forth in the prospectus supplement the terms on which a series of debt securities may be convertible into or exchangeable for common stock or other securities of ours or a third party, including the conversion or exchange rate, as applicable, or how it will be calculated, and the applicable conversion or exchange period. We will include provisions as to whether conversion or exchange is mandatory, at the option of the holder or at our option. We may include provisions pursuant to which the number of our securities or the securities of a third party that the holders of the series of debt securities receive upon conversion or exchange would, under the circumstances described in those provisions, be subject to adjustment, or pursuant to which those holders would, under those circumstances, receive other property upon conversion or exchange, for example in the event of our merger or consolidation with another entity.

Consolidation, Merger or Sale

The indentures in the forms initially filed as exhibits to the registration statement of which this prospectus is a part do not contain any covenant which restricts our ability to merge or consolidate, or sell, convey, transfer or otherwise dispose of all or substantially all of our assets. However, any successor of ours or acquiror of such assets must assume all of our obligations under the indentures and the debt securities.

If the debt securities are convertible for our other securities, the person with whom we consolidate or merge or to whom we sell all of our property must make provisions for the conversion of the debt securities into securities which the holders of the debt securities would have received if they had converted the debt securities before the consolidation, merger or sale.

Events of Default Under the Indenture

The following are events of default under the indentures with respect to any series of debt securities that we may issue:

Table of Contents

if we fail to pay interest when due and payable and our failure continues for 90 days and the time for payment has not been extended or deferred;

if we fail to pay the principal, or premium, if any, when due and payable and the time for payment has not been extended or delayed;

if we fail to observe or perform any other covenant contained in the debt securities or the indentures, other than a covenant specifically relating to another series of debt securities, and our failure continues for 90 days after we receive notice from the debenture trustee or holders of at least 25% in aggregate principal amount of the outstanding debt securities of the applicable series; and

if specified events of bankruptcy, insolvency or reorganization occur.

If an event of default with respect to debt securities of any series occurs and is continuing, other than an event of default specified in the last bullet point above, the debenture trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series, by notice to us in writing, and to the debenture trustee if notice is given by such holders, may declare the unpaid principal of, premium, if any, and accrued interest, if any, due and payable immediately. If an event of default specified in the last bullet point above occurs with respect to us, the principal amount of and accrued interest, if any, of each issue of debt securities then outstanding shall be due and payable without any notice or other action on the part of the debenture trustee or any holder.

The holders of a majority in principal amount of the outstanding debt securities of an affected series may waive any default or event of default with respect to the series and its consequences, except defaults or events of default regarding payment of principal, premium, if any, or interest, unless we have cured the default or event of default in accordance with the indenture.

Subject to the terms of the indentures, if an event of default under an indenture shall occur and be continuing, the debenture trustee will be under no obligation to exercise any of its rights or powers under such indenture at the request or direction of any of the holders of the applicable series of debt securities, unless such holders have offered the debenture trustee reasonable indemnity. The holders of a majority in principal amount of the outstanding debt securities of any series will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the debenture trustee, or exercising any trust or power conferred on the debenture trustee, with respect to the debt securities of that series, provided that:

the direction so given by the holder is not in conflict with any law or the applicable indenture; and

subject to its duties under the Trust Indenture Act, the debenture trustee need not take any action that might involve it in personal liability or might be unduly prejudicial to the holders not involved in the proceeding.

A holder of the debt securities of any series will only have the right to institute a proceeding under the indentures or to appoint a receiver or trustee, or to seek other remedies if:

the holder has given written notice to the debenture trustee of a continuing event of default with respect to that series;

the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series have made written request, and such holders have offered reasonable indemnity to the debenture trustee to institute the proceeding as trustee; and

the debenture trustee does not institute the proceeding, and does not receive from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series other conflicting directions within 90 days after the notice, request and offer.

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

These limitations do not apply to a suit instituted by a holder of debt securities if we default in the payment of the principal, premium, if any, or interest on, the debt securities.

We will periodically file statements with the debenture trustee regarding our compliance with specified covenants in the indentures.

Modification of Indenture; Waiver

We and the debenture trustee may change an indenture without the consent of any holders with respect to specific matters, including:

to fix any ambiguity, defect or inconsistency in the indenture;

to comply with the provisions described above under Consolidation, Merger or Sale;

Table of Contents

to comply with any requirements of the Securities and Exchange Commission in connection with the qualification of any indenture under the Trust Indenture Act;

to evidence and provide for the acceptance of appointment hereunder by a successor trustee;

to provide for uncertificated debt securities and to make all appropriate changes for such purpose;

to add to, delete from, or revise the conditions, limitations and restrictions on the authorized amount, terms or purposes of issuance, authorization and delivery of debt securities of any series;

to add to our covenants such new covenants, restrictions, conditions or provisions for the protection of the holders, to make the occurrence, or the occurrence and the continuance, of a default in any such additional covenants, restrictions, conditions or provisions an event of default, or to surrender any of our rights or powers under the indenture; or

to change anything that does not harm the interests of any holder of debt securities of any series.

In addition, under the indentures, the rights of holders of a series of debt securities may be changed by us and the debenture trustee with the written consent of the holders of at least a majority in aggregate principal amount of the outstanding debt securities of each series that is affected. However, we and the debenture trustee may only make the following changes with the consent of each holder of any outstanding debt securities affected:

extending the fixed maturity of the series of debt securities;

reducing the principal amount, reducing the rate of or extending the time of payment of interest, or reducing any premium payable upon the redemption of any debt securities; or

reducing the percentage of debt securities, the holders of which are required to consent to any supplemental indenture.

Discharge

Each indenture provides that we can elect to be discharged from our obligations with respect to one or more series of debt securities, except for obligations to:

register the transfer or exchange of debt securities of the series;

replace stolen, lost or mutilated debt securities of the series;

maintain paying agencies;

hold monies for payment in trust;

recover excess money held by the debenture trustee;

compensate and indemnify the debenture trustee; and

appoint any successor trustee.

In order to exercise our rights to be discharged, we must deposit with the debenture trustee money or government obligations sufficient to pay all the principal of, any premium, if any, and interest on, the debt securities of the series on the dates payments are due.

Form, Exchange and Transfer

We will issue the debt securities of each series only in fully registered form without coupons and, unless we otherwise specify in the applicable prospectus supplement, in denominations of \$1,000 and any integral multiple thereof. The indentures provide that we may issue debt securities of a series in temporary or permanent global form and as book-entry securities that will be deposited with, or on behalf of, The Depository Trust Company or another depository named by us and identified in a prospectus supplement with respect to that series. See Legal Ownership of Securities for a further description of the terms relating to any book-entry securities.

At the option of the holder, subject to the terms of the indentures and the limitations applicable to global securities described in the applicable prospectus supplement, the holder of the debt securities of any series can exchange the debt securities for other debt securities of the same series, in any authorized denomination and of like tenor and aggregate principal amount.

Subject to the terms of the indentures and the limitations applicable to global securities set forth in the applicable prospectus supplement, holders of the debt securities may present the debt securities for exchange or for registration of transfer, duly endorsed or with the form of transfer endorsed thereon duly executed if so required by us or the security registrar, at the office of the security registrar or at the office of any transfer agent designated by us for this purpose. Unless otherwise provided

Table of Contents

in the debt securities that the holder presents for transfer or exchange, we will make no service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges.

We will name in the applicable prospectus supplement the security registrar, and any transfer agent in addition to the security registrar, that we initially designate for any debt securities. We may at any time designate additional transfer agents or rescind the designation of any transfer agent or approve a change in the office through which any transfer agent acts, except that we will be required to maintain a transfer agent in each place of payment for the debt securities of each series.

If we elect to redeem the debt securities of any series, we will not be required to:

issue, register the transfer of, or exchange any debt securities of any series being redeemed in part during a period beginning at the opening of business 15 days before the day of mailing of a notice of redemption of any debt securities that may be selected for redemption and ending at the close of business on the day of the mailing; or

register the transfer of or exchange any debt securities so selected for redemption, in whole or in part, except the unredeemed portion of any debt securities we are redeeming in part.

Information Concerning the Debenture Trustee

The debenture trustee, other than during the occurrence and continuance of an event of default under an indenture, undertakes to perform only those duties as are specifically set forth in the applicable indenture. Upon an event of default under an indenture, the debenture trustee must use the same degree of care as a prudent person would exercise or use in the conduct of his or her own affairs. Subject to this provision, the debenture trustee is under no obligation to exercise any of the powers given it by the indentures at the request of any holder of debt securities unless it is offered reasonable security and indemnity against the costs, expenses and liabilities that it might incur.

Payment and Paying Agents

Unless we otherwise indicate in the applicable prospectus supplement, we will make payment of the interest on any debt securities on any interest payment date to the person in whose name the debt securities, or one or more predecessor securities, are registered at the close of business on the regular record date for the interest.

We will pay principal of and any premium and interest on the debt securities of a particular series at the office of the paying agents designated by us, except that, unless we otherwise indicate in the applicable prospectus supplement, we may make interest payments by check which we will mail to the holder or by wire transfer to certain holders. Unless we otherwise indicate in a prospectus supplement, we will designate an office or agency of the debenture trustee in the city of New York as our sole paying agent for payments with respect to debt securities of each series. We will name in the applicable prospectus supplement any other paying agents that we initially designate for the debt securities of a particular series. We will maintain a paying agent in each place of payment for the debt securities of a particular series.

All money we pay to a paying agent or the debenture trustee for the payment of the principal of or any premium or interest on any debt securities which remains unclaimed at the end of two years after such principal, premium or interest has become due and payable will be repaid to us, and the holder of the debt security thereafter may look only to us for payment thereof.

Governing Law

The indentures and the debt securities will be governed by and construed in accordance with the laws of the state of New York, except to the extent that the Trust Indenture Act is applicable.

Subordination of Subordinated Debt Securities

The subordinated debt securities will be subordinate and junior in priority of payment to certain of our other indebtedness to the extent described in a prospectus supplement. The indentures in the forms initially filed as exhibits to the registration statement of which this prospectus is a part do not limit the amount of indebtedness which we may incur, including senior indebtedness or subordinated indebtedness, and do not limit us from issuing any other debt, including secured debt or unsecured debt.

Table of Contents

DESCRIPTION OF WARRANTS

The following description, together with the additional information we include in any applicable prospectus supplements, summarizes the material terms and provisions of the warrants that we may offer under this prospectus, which consist of warrants to purchase our common stock, preferred stock and/or debt securities in one or more series. Warrants may be offered independently or together with our common stock, preferred stock and/or debt securities offered by any prospectus supplement, and may be attached to or separate from those securities. While the terms we have summarized below will generally apply to any future warrants we may offer under this prospectus, we will describe the particular terms of any warrants that we may offer in more detail in the applicable prospectus supplement. The terms of any warrants we offer under a prospectus supplement may differ from the terms we describe below.

We will issue the warrants directly or under a warrant agreement which we will enter into with a warrant agent to be selected by us. We have filed forms of the warrant agreements and the related warrant certificates for each type of warrant we may offer under this prospectus as exhibits to the registration statement of which this prospectus is a part. We use the term "warrant agreement" to refer to any of these warrant agreements. We use the term "warrant agent" to refer to the warrant agent under any of these warrant agreements. The warrant agent will act solely as an agent of ours in connection with the warrants and will not act as an agent for the holders or beneficial owners of the warrants.

The following summary of material provisions of the warrants and the warrant agreements are subject to, and qualified in their entirety by reference to, all the provisions of the warrant agreement applicable to a particular series of warrants. We urge you to read the applicable prospectus supplements related to the warrants that we sell under this prospectus, as well as the complete warrant agreements that contain the terms of the warrants.

General

We will describe in the applicable prospectus supplement the terms relating to a series of warrants. If warrants for the purchase of debt securities are offered, the prospectus supplement will describe the following terms, to the extent applicable:

the offering price and the aggregate number of warrants offered;

the currencies in which the warrants are being offered;

the designation, aggregate principal amount, currencies, denominations and terms of the series of debt securities that can be purchased if a holder exercises a warrant;

the designation and terms of any series of debt securities with which the warrants are being offered and the number of warrants offered with each such debt security;

the date on and after which the holder of the warrants can transfer them separately from the related series of debt securities;

the principal amount of the series of debt securities that can be purchased if a holder exercises a warrant and the price at which and currencies in which such principal amount may be purchased upon exercise;

the terms of any rights to redeem or call the warrants;

the date on which the right to exercise the warrants begins and the date on which such right expires;

federal income tax consequences of holding or exercising the warrants; and

any other specific terms, preferences, rights or limitations of, or restrictions on, the warrants.

Warrants for the purchase of debt securities will be in registered form only.

If warrants for the purchase of our common stock or preferred stock are offered, the prospectus supplement will describe the following terms, to the extent applicable:

the offering price and the aggregate number of warrants offered;

the total number of shares that can be purchased if a holder of the warrants exercises them and, in the case of warrants for preferred stock, the designation, total number and terms of the series of preferred stock that can be purchased upon exercise;

the designation and terms of any series of preferred stock with which the warrants are being offered and the number of warrants being offered with each share of common stock or preferred stock;

the date on and after which the holder of the warrants can transfer them separately from the related common stock or series of preferred stock;

Table of Contents

the number of shares of common stock or preferred stock that can be purchased if a holder exercises the warrant and the price at which such common stock or preferred stock may be purchased upon exercise, including, if applicable, any provisions for changes to or adjustments in the exercise price and in the securities or other property receivable upon exercise;

the terms of any rights to redeem or call, or accelerate the expiration of, the warrants;

the date on which the right to exercise the warrants begins and the date on which that right expires;

federal income tax consequences of holding or exercising the warrants; and

any other specific terms, preferences, rights or limitations of, or restrictions on, the warrants.

Warrants for the purchase of common stock or preferred stock will be in registered form only.

A holder of warrant certificates may exchange them for new certificates of different denominations, present them for registration of transfer and exercise them at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement. Until any warrants to purchase debt securities are exercised, the holder of the warrants will not have any of the rights of holders of the debt securities that can be purchased upon exercise, including any rights to receive payments of principal, premium or interest on the underlying debt securities or to enforce covenants in the applicable indenture. Until any warrants to purchase common stock, preferred stock or depositary shares are exercised, holders of the warrants will not have any rights of holders of the underlying common stock, preferred stock or depositary shares, including any rights to receive dividends or to exercise any voting rights, except to the extent set forth under **Warrant Adjustments** below.

Exercise of Warrants

Each holder of a warrant is entitled to purchase the principal amount of debt securities or number of shares of common stock, preferred stock or depositary shares, as the case may be, at the exercise price described in the applicable prospectus supplement. After the close of business on the day when the right to exercise terminates (or a later date if we extend the time for exercise), unexercised warrants will become void.

A holder of warrants may exercise them by following the general procedure outlined below:

delivering to the warrant agent the payment required by the applicable prospectus supplement to purchase the underlying security;

properly completing and signing the reverse side of the warrant certificate representing the warrants; and

delivering the warrant certificate representing the warrants to the warrant agent within five business days of the warrant agent receiving payment of the exercise price.

If you comply with the procedures described above, your warrants will be considered to have been exercised when the warrant agent receives payment of the exercise price, subject to the transfer books for the securities issuable upon exercise of the warrant not being closed on such date. After you have completed those procedures and subject to the foregoing, we will, as soon as practicable, issue and deliver to you the debt securities, common stock or preferred stock that you purchased upon exercise. If you exercise fewer than all of the warrants represented by a warrant certificate, a new warrant certificate will be issued to you for the unexercised amount of warrants. Holders of warrants will be required to pay any tax or governmental charge that may be imposed in connection with transferring the underlying securities in connection with the exercise of the warrants.

Amendments and Supplements to the Warrant Agreements

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

We may amend or supplement a warrant agreement without the consent of the holders of the applicable warrants to cure ambiguities in the warrant agreement, to cure or correct a defective provision in the warrant agreement, or to provide for other matters under the warrant agreement that we and the warrant agent deem necessary or desirable, so long as, in each case, such amendments or supplements do not harm the interests of the holders of the warrants.

Warrant Adjustments

Unless the applicable prospectus supplement states otherwise, the exercise price of, and the number of securities covered by, a common stock warrant or preferred stock warrant will be adjusted proportionately if we subdivide or combine our common stock or preferred stock, as applicable. In addition, unless the prospectus supplement states otherwise, if we, without payment therefor:

issue capital stock or other securities convertible into or exchangeable for common stock or preferred stock, or any rights to subscribe for, purchase or otherwise acquire any of the foregoing, as a dividend or distribution to holders of our common stock or preferred stock;

Table of Contents

pay any cash to holders of our common stock or preferred stock other than a cash dividend paid out of our current or retained earnings or other than in accordance with the terms of the preferred stock;

issue any evidence of our indebtedness or rights to subscribe for or purchase our indebtedness to holders of our common stock or preferred stock; or

issue common stock or preferred stock or additional stock or other securities or property to holders of our common stock or preferred stock by way of spinoff, split-up, reclassification, combination of shares or similar corporate rearrangement, then the holders of common stock warrants and preferred stock warrants, as applicable, will be entitled to receive upon exercise of the warrants, in addition to the securities otherwise receivable upon exercise of the warrants and without paying any additional consideration, the amount of stock and other securities and property such holders would have been entitled to receive had they held the common stock or preferred stock, as applicable, issuable under the warrants on the dates on which holders of those securities received or became entitled to receive such additional stock and other securities and property.

Except as stated above, the exercise price and number of securities covered by a common stock warrant or preferred stock warrant, and the amounts of other securities or property to be received, if any, upon exercise of those warrants, will not be adjusted or provided for if we issue those securities or any securities convertible into or exchangeable for those securities, or securities carrying the right to purchase those securities or securities convertible into or exchangeable for those securities.

Holders of common stock warrants and preferred stock warrants may have additional rights under the following circumstances:

certain reclassifications, capital reorganizations or changes of the common stock or preferred stock, as applicable;

certain share exchanges, mergers, or similar transactions involving us and which result in changes of the common stock or preferred stock, as applicable; or

certain sales or dispositions to another entity of all or substantially all of our property and assets.

If one of the above transactions occurs and holders of our common stock or preferred stock are entitled to receive stock, securities or other property with respect to or in exchange for their securities, the holders of the common stock warrants and preferred stock warrants then outstanding, as applicable, will be entitled to receive upon exercise of their warrants the kind and amount of shares of stock and other securities or property that they would have received upon the applicable transaction if they had exercised their warrants immediately before the transaction.

Table of Contents

LEGAL OWNERSHIP OF SECURITIES

We can issue securities in registered form or in the form of one or more global securities. We describe global securities in greater detail below. We refer to those persons who have securities registered in their own names on the books that we or any applicable trustee or depositary or warrant agent maintain for this purpose as the **holders** of those securities. These persons are the legal holders of the securities. We refer to those persons who, indirectly through others, own beneficial interests in securities that are not registered in their own names, as **indirect holders** of those securities. As we discuss below, indirect holders are not legal holders, and investors in securities issued in book-entry form or in street name will be indirect holders.

Book-Entry Holders

We may issue securities in book-entry form only, as we will specify in the applicable prospectus supplement. This means securities may be represented by one or more global securities registered in the name of a financial institution that holds them as depositary on behalf of other financial institutions that participate in the depositary's book-entry system. These participating institutions, which are referred to as participants, in turn, hold beneficial interests in the securities on behalf of themselves or their customers.

Only the person in whose name a security is registered is recognized as the holder of that security. Global securities will be registered in the name of the depositary. Consequently, for global securities, we will recognize only the depositary as the holder of the securities, and we will make all payments on the securities to the depositary. The depositary passes along the payments it receives to its participants, which in turn pass the payments along to their customers who are the beneficial owners. The depositary and its participants do so under agreements they have made with one another or with their customers; they are not obligated to do so under the terms of the securities.

As a result, investors in a global security will not own securities directly. Instead, they will own beneficial interests in a global security, through a bank, broker or other financial institution that participates in the depositary's book-entry system or holds an interest through a participant. As long as the securities are issued in global form, investors will be indirect holders, and not holders, of the securities.

Street Name Holders

We may terminate a global security or issue securities that are not issued in global form. In these cases, investors may choose to hold their securities in their own names or in **street name**. Securities held by an investor in street name would be registered in the name of a bank, broker or other financial institution that the investor chooses, and the investor would hold only a beneficial interest in those securities through an account he or she maintains at that institution.

For securities held in street name, we or any applicable trustee or depositary will recognize only the intermediary banks, brokers and other financial institutions in whose names the securities are registered as the holders of those securities, and we or any such trustee or depositary will make all payments on those securities to them. These institutions pass along the payments they receive to their customers who are the beneficial owners, but only because they agree to do so in their customer agreements or because they are legally required to do so. Investors who hold securities in street name will be indirect holders, not holders, of those securities.

Legal Holders

Our obligations, as well as the obligations of any applicable trustee or third party employed by us or a trustee, run only to the legal holders of the securities. We do not have obligations to investors who hold beneficial interests in global securities, in street name or by any other indirect means. This will be the case whether an investor chooses to be an indirect holder of a security or has no choice because we are issuing the securities only in global form.

For example, once we make a payment or give a notice to the holder, we have no further responsibility for the payment or notice even if that holder is required, under agreements with its participants or customers or by law, to pass it along to the indirect holders but does not do so. Similarly, we may want to obtain the approval of the holders to amend an indenture, to relieve us of the consequences of a default or of our obligation to comply with a particular provision of an indenture, or for other purposes. In such an event, we would seek approval only from the holders, and not the indirect holders, of the securities. Whether and how the holders contact the indirect holders is up to the holders.

Special Considerations For Indirect Holders

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

If you hold securities through a bank, broker or other financial institution, either in book-entry form because the securities are represented by one or more global securities or in street name, you should check with your own institution to find out:

how it handles securities payments and notices;

whether it imposes fees or charges;

Table of Contents

how it would handle a request for the holders' consent, if ever required;

whether and how you can instruct it to send you securities registered in your own name so you can be a holder, if that is permitted in the future;

how it would exercise rights under the securities if there were a default or other event triggering the need for holders to act to protect their interests; and

if the securities are global securities, how the depositary's rules and procedures will affect these matters.

Global Securities

A global security is a security which represents one or any other number of individual securities held by a depositary. Generally, all securities represented by the same global securities will have the same terms.

Each security issued in book-entry form will be represented by a global security that we issue to, deposit with and register in the name of a financial institution or its nominee that we select. The financial institution that we select for this purpose is called the depositary. Unless we specify otherwise in the applicable prospectus supplement, The Depository Trust Company, New York, New York, known as DTC, will be the depositary for all global securities issued under this prospectus.

A global security may not be transferred to or registered in the name of anyone other than the depositary, its nominee or a successor depositary, unless special termination situations arise. We describe those situations below under "Special Situations When a Global Security Will Be Terminated." As a result of these arrangements, the depositary, or its nominee, will be the sole registered owner and holder of all securities represented by a global security, and investors will be permitted to own only beneficial interests in a global security. Beneficial interests must be held by means of an account with a broker, bank or other financial institution that in turn has an account with the depositary or with another institution that does. Thus, an investor whose security is represented by a global security will not be a holder of the security, but only an indirect holder of a beneficial interest in the global security.

If the prospectus supplement for a particular security indicates that the security will be issued as a global security, then the security will be represented by a global security at all times unless and until the global security is terminated. If termination occurs, we may issue the securities through another book-entry clearing system or decide that the securities may no longer be held through any book-entry clearing system.

Special Considerations For Global Securities

As an indirect holder, an investor's rights relating to a global security will be governed by the account rules of the investor's financial institution and of the depositary, as well as general laws relating to securities transfers. We do not recognize an indirect holder as a holder of securities and instead deal only with the depositary that holds the global security.

If securities are issued only as a global security, an investor should be aware of the following:

An investor cannot cause the securities to be registered in his or her name, and cannot obtain non-global certificates for his or her interest in the securities, except in the special situations we describe below;

An investor will be an indirect holder and must look to his or her own bank or broker for payments on the securities and protection of his or her legal rights relating to the securities, as we describe above;

An investor may not be able to sell interests in the securities to some insurance companies and to other institutions that are required by law to own their securities in non-book-entry form;

An investor may not be able to pledge his or her interest in the global security in circumstances where certificates representing the securities must be delivered to the lender or other beneficiary of the pledge in order for the pledge to be effective;

The depositary's policies, which may change from time to time, will govern payments, transfers, exchanges and other matters relating to an investor's interest in the global security. We and any applicable trustee have no responsibility for any aspect of the depositary's actions or for its records of ownership interests in the global security. We and the trustee also do not supervise the depositary in any way;

The depositary may, and we understand that DTC will, require that those who purchase and sell interests in the global security within its book-entry system use immediately available funds, and your broker or bank may require you to do so as well; and

Financial institutions that participate in the depositary's book-entry system, and through which an investor holds its interest in the global security, may also have their own policies affecting payments, notices and other matters relating

Table of Contents

to the securities. There may be more than one financial intermediary in the chain of ownership for an investor. We do not monitor and are not responsible for the actions of any of those intermediaries.

Special Situations When A Global Security Will Be Terminated

In a few special situations described below, a global security will terminate and interests in it will be exchanged for physical certificates representing those interests. After that exchange, the choice of whether to hold securities directly or in street name will be up to the investor. Investors must consult their own banks or brokers to find out how to have their interests in securities transferred to their own name, so that they will be direct holders. We have described the rights of holders and street name investors above.

A global security will terminate when the following special situations occur:

if the depositary notifies us that it is unwilling, unable or no longer qualified to continue as depositary for that global security and we do not appoint another institution to act as depositary within 90 days;

if we notify any applicable trustee that we wish to terminate that global security; or

if an event of default has occurred with regard to securities represented by that global security and has not been cured or waived. The prospectus supplement may also list additional situations for terminating a global security that would apply only to the particular series of securities covered by the prospectus supplement. When a global security terminates, the depositary, and not we or any applicable trustee, is responsible for deciding the names of the institutions that will be the initial direct holders.

Table of Contents

PLAN OF DISTRIBUTION

We may sell the securities covered by this prospectus in any of three ways (or in any combination):

to or through underwriters or dealers;

directly to a limited number of purchasers or to a single purchaser; or

through agents.

We may also sell directly to investors through subscription rights distributed to our stockholders on a pro rata basis. In connection with any distribution of subscription rights to stockholders, if all of the underlying securities are not subscribed for, we may sell the unsubscribed shares of our common stock directly to third parties or may engage the services of one or more underwriters, dealers or agents, including standby underwriters, to sell the unsubscribed securities to third parties.

The prospectus supplement will set forth the terms of the offering of the securities covered by this prospectus, including:

the name or names of any underwriters, dealers or agents and the amounts of securities underwritten or purchased by each of them;

any over-allotment options under which underwriters may purchase additional securities from us;

any underwriting discounts or commissions or agency fees and other items constituting underwriters' or agents' compensation;

the initial public offering price of the securities and the proceeds to us and any discounts, commissions or concessions allowed or reallocated or paid to dealers; and

any securities exchanges or markets on which the securities may be listed.

Only underwriters named in the prospectus supplement are underwriters of the securities offered by the prospectus supplement.

Any initial public offering price and any discounts or concessions allowed or reallocated or paid to dealers may be changed from time to time.

The distribution of our securities may be effected from time to time in one or more transactions at a fixed price or prices, which may be changed, at market prices prevailing at the time of sale, at prices related to such prevailing market prices, or at negotiated price, any of which may represent a discount from the prevailing market prices. If underwriters are used in the sale of any securities, the securities will be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions described above. The securities may be either offered to the public through underwriting syndicates represented by managing underwriters, or directly by underwriters. Generally, the underwriters' obligations to purchase the securities will be subject to conditions precedent and the underwriters will be obligated to purchase all of the securities if they purchase any of the securities. We may use underwriters with whom we have a material relationship. We will describe in the prospectus supplement, naming the underwriter, the nature of any such relationship.

We may engage in at-the-market offerings of our common stock. An at-the-market offering is an offering of our common stock at other than a fixed price to or through a market maker.

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

We may sell the securities directly or through agents we designate from time to time. The prospectus supplement will name any agent involved in the offer or sale of the securities and any commissions we pay to them. Generally, any agent will be acting on a best efforts basis for the period of its appointment.

We may authorize underwriters, dealers or agents to solicit offers by certain purchasers to purchase the securities from us at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. The contracts will be subject only to those conditions set forth in the prospectus supplement, and the prospectus supplement will set forth any commissions we pay for solicitation of these contracts.

Agents and underwriters may be entitled to indemnification by us against certain civil liabilities, including liabilities under the Securities Act, or to contribution with respect to payments which the agents or underwriters may be required to make in respect thereof. Agents and underwriters may be customers of, engage in transactions with, or perform services for us in the ordinary course of business.

In connection with the sale of our securities, underwriters or agents may receive compensation from us or from purchasers of the securities, for whom they may act as agents, in the form of discounts, concessions or commissions. Underwriters may sell securities to or through dealers, and these dealers may receive compensation in the form of discounts, concessions or commissions from the underwriters and/or commissions from the purchasers for whom they may act as agents. Underwriters, dealers, and agents that participate in the distribution of securities may be deemed to be underwriters under the

Table of Contents

Securities Act, and any discounts or commissions they receive from us and any profit on the resale of securities they realize may be deemed to be underwriting discounts and commissions under the Securities Act.

Unless otherwise specified in the related prospectus supplement, all securities we offer, other than common stock, will be new issues of securities with no established trading market. Any underwriters may make a market in these securities, but will not be obligated to do so and may discontinue any market making at any time without notice. We may apply to list any series of debt securities, preferred stock or warrants on an exchange, but we are not obligated to do so. Therefore, no assurance can be given as to the liquidity of, or the trading market for, any series of securities.

Any underwriter may engage in over-allotment transactions, stabilizing transactions, short-covering transactions and penalty bids in accordance with Regulation M under the Exchange Act. Over-allotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Short covering transactions involve purchases of the securities in the open market after the distribution is completed to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time.

To comply with applicable state securities laws, the securities offered by this prospectus will be sold, if necessary, in such jurisdictions only through registered or licensed brokers or dealers. In addition, securities may not be sold in some states 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.

Any underwriters who are qualified market makers on the Nasdaq Global Market may engage in passive market making transactions in the common stock on the Nasdaq Global Market in accordance with Rule 103 of Regulation M, during the business day prior to the pricing of the offering, before the commencement of offers or sales of the common stock. Passive market makers must comply with applicable volume and price limitations and must be identified as passive market makers. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for such security; if all independent bids are lowered below the passive market maker's bid, however, the passive market maker's bid must then be lowered when certain purchase limits are exceeded.

Table of Contents

LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for us by Heller Ehrman LLP, Seattle, Washington.

EXPERTS

Stonefield Josephson, Inc., an independent registered public accounting firm, has audited our consolidated financial statements and consolidated financial statement schedule at December 31, 2007, and for each of the three years in the period ended December 31, 2007, included in our Annual Report on Form 10-K for the year ended December 31, 2007, 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.

Table of Contents

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the information requirements of the Securities Exchange Act of 1934 (hereinafter 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.cticseattle.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.

Our common stock is listed on the Nasdaq Global 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.

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. Information that we file later with the Commission will automatically update and supersede this information. We incorporate by reference the documents listed below:

our Annual Report on Form 10-K for the fiscal year ended December 31, 2007, as amended;

our definitive Proxy Statements on Schedule 14A, dated and filed with the SEC on August 28, 2007 for our 2007 Annual Meeting of Shareholders and on December 21, 2007 for our Special Meeting of the Shareholders;

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 and March 21, 2008; 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 CTI common stock, 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