

CELL THERAPEUTICS INC
Form 424B5
July 23, 2009
Table of Contents

Filed Pursuant to Rule 424(b)(5)
Registration No. 333-158272

PROSPECTUS SUPPLEMENT

To Prospectus dated April 6, 2009

CELL THERAPEUTICS, INC.

29,332,107 Shares of Common Stock

Warrants to Purchase 7,333,027 Shares of Common Stock

We are offering for sale 29,332,107 shares of our common stock, no par value, and warrants to purchase up to 7,333,027 shares of our common stock. Each purchaser of a share of our common stock in this offering will receive a warrant exercisable for .25 shares of our common stock. We will sell our common stock and warrants in this offering for \$1.30 per share of common stock and warrant. Each warrant to purchase shares of our common stock will have an exercise price of \$1.70 per share. The warrants are exercisable immediately and expire nine months from the date of this prospectus supplement.

For a more detailed description of our common stock and warrants, see the sections entitled "Description of Capital Stock" and "Description of Warrants" beginning on pages S-27 and S-29, respectively, of this prospectus supplement.

Our common stock is quoted on The NASDAQ Capital Market and on the MTA stock market in Italy under the symbol "CTIC". The warrants will not be listed on any national securities exchange. On July 21, 2009, the last reported sale price of our common stock on The NASDAQ Capital Market was \$1.51.

This investment involves a high degree of risk. See Risk Factors beginning on page S-5 of this prospectus supplement and on page 12 of the accompanying prospectus.

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

	Per Share of Common Stock and warrant		Total
	(1)		
Public offering price per share of common stock and warrant	\$	1.300	\$ 38,131,739.00
Underwriting discount	\$	0.065	\$ 1,906,586.90
Total proceeds to us before other expenses	\$	1.235	\$ 36,225,152.10

(1) Table excludes shares of common stock issuable on exercise of the warrants offered hereby.

We have granted the underwriter the right to purchase an additional 4,399,816 shares of our common stock and warrants to purchase up to 1,099,954 additional shares of our common stock to cover over-allotments. The underwriter may exercise this right at any time up to 30 days after the offering. In addition, the underwriter will receive warrants exercisable for 586,642 registered shares of our common stock pursuant to this prospectus supplement.

Rodman & Renshaw, LLC

The date of this prospectus supplement is July 22, 2009.

Table of Contents

TABLE OF CONTENTS

Prospectus Supplement

	Page
<u>About This Prospectus Supplement</u>	S-ii
<u>Where You Can Find More Information</u>	S-ii
<u>Special Note Regarding Forward-Looking Statements</u>	S-iii
<u>Summary</u>	S-1
<u>Risk Factors</u>	S-5
<u>Use of Proceeds</u>	S-23
<u>Price Range of Common Stock</u>	S-24
<u>Dividend Policy</u>	S-25
<u>Dilution</u>	S-26
<u>Description of Capital Stock</u>	S-27
<u>Description of Warrants</u>	S-29
<u>Certain U.S. Federal Income Tax Considerations</u>	S-30
<u>Underwriting</u>	S-31
<u>Legal Matters</u>	S-33
<u>Experts</u>	S-33
<u>Incorporation of Certain Documents By Reference</u>	S-34

Prospectus

	Page
<u>About This Prospectus</u>	1
<u>Summary</u>	2
<u>Financial Ratios</u>	10
<u>Special Note Regarding Forward-Looking Statements</u>	11
<u>Risk Factors</u>	12
<u>Use of Proceeds</u>	27
<u>Dividend Policy</u>	27
<u>Description of Capital Stock</u>	28
<u>Description of Debt Securities</u>	29
<u>Description of Warrants</u>	36
<u>Legal Ownership of Securities</u>	39
<u>Plan of Distribution</u>	43
<u>Legal Matters</u>	45
<u>Experts</u>	45
<u>Where You Can Find More Information</u>	45

You should rely only on the information contained or incorporated by reference in this prospectus supplement or the accompanying prospectus. We have not authorized anyone to provide you with different information.

We are not making an offer of our common stock and warrants covered by this prospectus supplement in any jurisdiction where the offer is not permitted.

You should not assume that the information contained in or incorporated by reference in this prospectus supplement or the accompanying prospectus is accurate as of any date other than the respective dates thereof.

Table of Contents

ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement, which describes the terms of this offering of common stock and warrants and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference. The second part is the accompanying prospectus, which gives more general information. 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, on the other hand, the information in this prospectus supplement shall control.

In this prospectus supplement, the terms CTI, Company, we, us, our and similar terms refer to Cell Therapeutics, Inc., a Washington corporation and its subsidiaries, unless the context otherwise requires.

You should rely only on the information contained in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference. 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 supplement 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. The information contained in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference is accurate only as of their respective dates, regardless of the time of delivery of this prospectus supplement and the accompanying prospectus, or of any sale of our common stock and warrants. You should read this prospectus supplement, the accompanying prospectus and the documents incorporated by reference before making an investment decision. You should also read and consider the information in the documents we have referred you to in the section of this prospectus supplement entitled Incorporation of Certain Documents by Reference.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the information requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act. In accordance with the Exchange Act, we file reports, proxy statements and other information with the Securities and Exchange Commission, or the SEC. Such reports, proxy statements and other information filed by us are available to the public free of charge at <http://www.sec.gov>. Copies of certain information filed by us with the SEC are also available on our website at <http://www.celltherapeutics.com>. You may also read and copy any document we file 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.

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

This prospectus supplement and the accompanying prospectus are part of a registration statement we filed with the SEC. This prospectus supplement and the accompanying prospectus omit some information contained in the registration statement in accordance with SEC rules and regulations. You should review the information and exhibits in the registration statement for further information about us and the securities we are offering. Statements in this prospectus supplement or the accompanying prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these filings. You should review the complete document to evaluate these statements.

Table of Contents

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus and the documents incorporated by reference may contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Exchange Act. All statements other than statements of historical fact are forward-looking statements for purposes of these provisions, including:

any projections of cash resources, revenues, operating expenses or other financial terms;

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

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 or timelines;

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 terms such as anticipates, believes, continue, could, estimates, expects, plans, potential, predicts, should or will or the negative thereof or other comparable terms. Such statements are based on management's current expectations and are subject to risks and uncertainties which may cause actual results to differ materially from those set forth in the forward-looking statements. 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 those 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 described in the section of this prospectus supplement entitled Risk Factors. All forward-looking statements and reasons why results may differ included in this prospectus supplement 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, except to the extent required by law.

Table of Contents

SUMMARY

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

Our Company

We focus on the development, acquisition and commercialization of drugs for the treatment of cancer. Our principal business strategy is focused on cancer therapeutics; an area with significant market opportunity that we believe is not adequately served by existing therapies. Our operations are primarily conducted in the United States and we are winding down our operations in Italy. During 2008, we had one approved drug, Zevalin[®] (ibritumomab tiuxetan), or Zevalin, which we acquired in 2007, generating product sales. We contributed Zevalin to a joint venture, RIT Oncology, LLC, or RIT Oncology, upon its formation in December 2008 and in March 2009 we finalized the sale of our 50% interest in RIT Oncology to the other member of the joint venture, Spectrum Pharmaceuticals, Inc., or Spectrum. All of our current product candidates, including pixantrone, OPAXIO and brostallicin are under development.

Recent Developments

Debt and Equity Restructurings

In February 2009, 200 shares of Series A Preferred Stock, 2,218 shares of Series B Preferred Stock and 4,284 shares of Series C Preferred Stock were exchanged for 6,702 shares of Series F Preferred Stock.

On April 1 and 2, 2009, all shares of Series F Preferred Stock were converted into 47,871,425 shares of common stock.

On April 7, 2009, we issued 288,517 shares of common stock in exchange for 100 shares of Series A Preferred Stock and associated warrants to purchase 747 shares of common stock.

On April 17, 2009, we issued 3,452,493 shares of common stock in exchange for 1,000 shares of Series D Preferred Stock and associated warrants to purchase 19,138 shares of common stock.

On April 13, 2009, we entered into a securities purchase agreement by and between the Company and a single institutional investor pursuant to which we agreed to issue in a registered offering 15,000 shares of Series 1 Preferred Stock, no par value, or the Series 1 Preferred, convertible into 50,000,000 shares of common stock at a conversion price of \$0.30 per share, for a purchase price of \$1,000 per share of Series 1 Preferred and associated warrants, Class A warrants to purchase 9,183,562 shares of common stock and Class B Warrants to purchase 13,316,438 shares of common stock. In addition, the original holder of the Series 1 Preferred had, pursuant to the terms of the Series 1 Preferred, the right to purchase up to 5,000 additional shares of Series 1 Preferred at \$1,000 per share within 60 days of April 13, 2009. The Class A Warrants were exercisable immediately, and on May 6, 2009, the holder exercised all of the Class A Warrants resulting in our issuance of 9,183,562 shares of common stock and our receipt of approximately \$3.8 million in proceeds from the exercise thereof. The Class B Warrants will become exercisable beginning on October 14, 2009 and will terminate on October 14, 2014. The exercise price per share of common stock issuable upon exercise of the Class B Warrants is \$0.41 per share of common stock (subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting shares of common stock). In connection with this offering, we expect to recognize a deemed dividend on the Series 1 Preferred of approximately \$8.2 million in our consolidated statement of operations for the three and six months ended June 30, 2009.

On May 11, 2009, we received aggregate gross proceeds of \$20.0 million in connection with our issuance of 16,000,000 shares of common stock and warrants to purchase 4,800,000 shares of common stock sold pursuant to a purchase agreement we entered into on that date.

On June 22, 2009, we exchanged \$7,117,336.50 in cash and 24,235,986 shares of common stock for \$52,917,000.00 aggregate principal amount of outstanding various series of convertible notes in connection with our five separate concurrent exchange offers for any and all of such convertible notes. The exchange offers commenced on May 12, 2009 and expired on June 16, 2009. All notes accepted by us in the exchange offers have been cancelled.

Table of Contents

Restructuring of Resources

In connection with the sale of our 50% interest in RIT Oncology to Spectrum as discussed above, we announced an immediate reduction in force and plans for an additional reduction of employees following the termination of services to RIT Oncology. These positions were directly and indirectly involved in the sales and marketing, medical affairs and other operations of Zevalin. As of March 31, 2009, 22 employees had been terminated, with nine of these employees receiving employment or consulting positions with Spectrum.

During the first quarter of 2009, we announced that we had engaged the services of a strategic advisory consulting firm to assist in developing strategic options for a partnership, asset divestment or joint venture for our Italian branch. As of May 5, 2009, we had exhausted our efforts in finding a partner or buyer and the termination of our Bresso employees was planned. On May 13, 2009, we entered into an agreement with the unions representing the employees of the Bresso facility in connection with the closure of that facility. The agreement relates to a reduction of our total headcount in Italy by 56 positions in the immediate months. We have also sent notices of termination to the six managers of the Bresso facility and will seek to enter into separate severance arrangements with these managers.

Lack of Liquidity

Our available cash and cash equivalents are approximately \$0.7 million as of March 31, 2009. In addition, in April 2009, we received \$6.5 million in gross proceeds from Spectrum in connection with the sale of our 50% interest in RIT Oncology to Spectrum, as well as \$20.0 million in gross proceeds from the issuance of 20,000 shares of our Series 1 Preferred Stock. We also received \$3.8 million in May 2009 for the exercise of all Class A Warrants related to our Series 1 Preferred Stock. On May 11, 2009, we received aggregate gross proceeds of \$20.0 million in connection with our issuance of common stock and warrants to purchase common stock. On June 22, 2009, we paid approximately \$7.1 million in cash in connection with our separate concurrent exchange offers for any and all of our outstanding various series of convertible notes. Without giving effect to the sale of our common stock and warrants pursuant to this prospectus supplement, we will not have sufficient cash to fund our planned operations through September 2009. Accordingly, we have implemented cost saving initiatives to reduce operating expenses, including the reduction of employees related to Zevalin operations and our planned closure of our operations in Italy, and we continue to seek additional areas for cost reductions. However, we will also need to raise additional funds and are currently exploring alternative sources of equity or debt financing. We may seek to raise such capital through public or private equity financings, partnerships, joint ventures, dispositions of assets, debt financings or restructurings, bank borrowings or other sources. Additional funding may not be available on favorable terms or at all, and we are subject to certain regulatory and contractual limitations on our financing activities, which may limit our ability to raise additional funding. If additional funds are raised by issuing equity securities, substantial dilution to existing shareholders may result. If we fail to obtain additional capital when needed, we may be required to delay, scale back, or eliminate some or all of our research and development programs.

Corporate Information

We were incorporated in the State of Washington in 1991. Our shares of common stock trade on The NASDAQ Capital Market under the symbol CTIC. Our principal executive offices are located at 501 Elliott Avenue West, Suite 400, Seattle, Washington 98119, and our phone number is (206) 282-7100. Our website is located at <http://www.celltherapeutics.com>; however, the information in, or that can be accessed through, our website is not part of this prospectus supplement or the accompanying prospectus.

Table of Contents

THE OFFERING

Securities we are offering pursuant to this prospectus supplement	29,332,107 shares of common stock and warrants to purchase up to 7,333,027 shares of common stock issuable upon exercise of the warrants. We will sell our shares of common stock and warrants in this offering at a price of \$1.30 per share and warrant. The shares of common stock and the warrants will be issued separately, but can only be purchased together in this offering.
Description of warrants	Each purchaser will receive a warrant to purchase .25 shares of common stock for each share of common stock it purchases in this offering. The warrants are exercisable at an exercise price of \$1.70 per share of common stock. The warrants are exercisable immediately and expire nine months from the date of issuance. See Description of Warrants.
Use of proceeds after expenses	We intend to use the proceeds from this offering for working capital and for general corporate purposes, which may include, among other things, paying interest on and/or retiring portions of our outstanding debt, funding research and development, preclinical and clinical trials, the preparation and filing of new drug applications and general working capital. See Use of Proceeds.
Risk factors	This investment involves a high degree of risk. See Risk Factors beginning on page S-5 of this prospectus supplement and page 12 of the accompanying prospectus.
Market for our common stock	Our common stock is quoted on The NASDAQ Capital Market and on the MTA stock market in Italy under the symbol CTIC. On July 21, 2009, the last reported sale price of our common stock on The NASDAQ Capital Market was \$1.51.
Market for the warrants	There is no established public trading market for the offered warrants and we do not expect a market to develop. In addition, we do not intend to apply for listing of the warrants on any national securities exchange.
Other covenants	We have agreed not to issue any additional securities for a period of 30 days, subject to certain customary exceptions. See Underwriting.
Common stock to be outstanding after this offering	531,659,759 shares

Table of Contents

The number of shares of common stock that will be outstanding immediately after this offering is based on 502,327,652 shares of common stock outstanding as of July 21, 2009 and excludes the underwriter's over-allotment shares of common stock and warrants and the following:

outstanding options to purchase a total of 428,156 shares of common stock at a weighted-average exercise price of \$247.77 per share;

20,811,257 shares of common stock issuable from time to time upon exercise of warrants outstanding prior to this offering;

7,333,027 shares of common stock issuable from time to time upon exercise of the warrants issued in this offering;

586,642 shares of common stock issuable from time to time upon exercise of warrants issued to Rodman & Renshaw, LLC in connection with this offering;

293,321 shares of common stock issuable from time to time upon exercise of warrants issued to Trout Capital LLC in connection with this offering;

80,301 shares of common stock issuable upon conversion of our outstanding 4% convertible senior subordinated notes due 2010;

363,766 shares of common stock issuable upon conversion of our outstanding 5.75% convertible senior notes due 2011;

14,264 shares of common stock issuable upon conversion of our outstanding 6.75% convertible senior notes due 2010; and

122,620 shares of common stock issuable upon conversion of our outstanding 7.5% convertible senior notes due 2011.

Table of Contents

RISK FACTORS

You should carefully consider the risks described below and other information in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference before deciding to invest in our securities. If any of the following risks actually occur, they could materially adversely affect our business, financial condition, operating results or prospects. 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.

Risks Related to this Offering

There is no public market for the warrants being offered in this offering.

There is no established public trading market for the warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply for listing of the warrants on any securities exchange. Without an active market, the liquidity of the warrants will be limited.

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

We intend to use the net proceeds from this offering for general corporate purposes. See **Use of Proceeds**. 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.

Purchasers of warrants who exercise their warrants for shares of common stock will incur immediate dilution.

Upon exercise of your warrants for shares of common stock, you will experience immediate and substantial dilution because the exercise price of your warrants 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 outstanding options and warrants and under our stock option plan or other employee or director compensations plans.

Holders of our warrants will have no rights as a common stockholder until they acquire our common stock.

Until you acquire shares of our common stock upon exercise of the warrants, you will have no rights with respect to our common stock, including rights to vote or respond to tender offers. Upon exercise of your warrants, you will be entitled to exercise the rights of a common shareholder only as to matters for which the record date occurs after the exercise date.

The warrants are only exercisable for nine months from the date of issuance.

The warrants are only exercisable for nine months from the date of issuance. In the event our common stock price does not exceed the exercise price of the warrants during the period when the warrants are exercisable, the warrants may not have any value.

Risks Related to Holders of our Common Stock

Shares of Common Stock are equity securities and are subordinate to our existing and future indebtedness.

Shares of our common stock are common equity interests. This means the shares of our common stock rank junior to any preferred stock that we may issue in the future, to our indebtedness, and to all creditor claims and other non-equity claims against us and our assets available to satisfy claims on us, including claims in a bankruptcy or similar proceeding. Our existing and future indebtedness may restrict payment of dividends on our shares of common stock.

Table of Contents

Additionally, unlike indebtedness, where principal and interest customarily are payable on specified due dates, in the case of shares of our common stock, (i) dividends are payable only when and if declared by our board of directors or a duly authorized committee of our board of directors, and (ii) as a corporation, we are restricted to making dividend payments and redemption payments out of legally available assets. We have never paid a dividend on our shares of common stock and have no current intention to pay dividends in the future. Further, our shares of common stock place no restrictions on our business or operations or on our ability to incur indebtedness or engage in any transactions, subject only to the voting rights available to shareholders generally.

The market price of shares of our common stock may be adversely affected by market conditions affecting the stock markets in general, including price and trading fluctuations on The NASDAQ Capital Market.

The market price of our common stock may be adversely affected by market conditions affecting the stock markets in general, including price and trading fluctuations on The NASDAQ Capital Market. These conditions may result in (i) volatility in the level of, and fluctuations in, the market prices of stocks generally and, in turn, our shares of common stock, and (ii) sales of substantial amounts of our common stock in the market, in each case that could be unrelated or disproportionate to changes in our operating performance.

There may be future sales or other dilution of our equity, which may adversely affect the market price of our shares of common stock.

We are not restricted from issuing additional shares of common stock or preferred stock, including any securities that are convertible into or exchangeable for, or that represent the right to receive, shares of common stock or preferred stock or any substantially similar securities. The market price of our shares of common stock or preferred stock could decline as a result of sales of a large number of shares of our common stock or preferred stock or similar securities in the market after consummation of this offering or the perception that such sales could occur in the future.

The market price for our shares of common stock 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 July 21, 2009, our stock price has ranged from a low of \$0.05 to a high of \$3.80. Fluctuations in the trading price or liquidity of our common stock may adversely affect the value of your investment in our common stock.

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

announcements by us or others of results of preclinical testing and clinical trials and regulatory actions;

announcements of technological innovations or new commercial therapeutic products by us, our collaborative partners or our present or potential competitors;

our issuance of additional debt, equity or other securities, which we need to pursue in 2009 to generate additional funds to cover our current debt and operating expenses;

our quarterly operating results;

developments or disputes concerning patent or other proprietary rights;

Table of Contents

developments in our relationships with collaborative partners;

acquisitions or divestitures;

litigation and government proceedings;

adverse legislation, including changes in governmental regulation;

third-party reimbursement policies;

changes in securities analysts' recommendations;

short selling;

changes in health care policies and practices;

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

economic and other external factors; and

general market conditions.

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

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

Provisions of our amended and restated articles of incorporation and amended and restated 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 of directors so that only approximately one third of our 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 amended and restated 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.

S-7

Table of Contents

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 Our Company

We need to raise additional funds and expect that we will need to continue to raise funds in the future.

We have substantial operating expenses associated with the development of our product candidates. As of March 31, 2009, we had cash and cash equivalents of approximately \$0.7 million, which does not take into account \$6.5 million in gross proceeds received from Spectrum on April 3, 2009 in connection with the sale of our 50% interest in RIT Oncology to Spectrum, as well as \$20.0 million in gross proceeds received in April 2009 for the issuance of 20,000 shares of our Series 1 Preferred Stock, Class A Warrants and Class B Warrants. In May 2009, we received \$3.8 million in connection with the exercise of all Class A Warrants issued in connection with our issuance of Series 1 Preferred Stock, Class A Warrants and Class B Warrants, and \$20.0 million in gross proceeds in connection with our issuance of 16,000,000 shares of common stock and warrants to purchase 4,800,000 shares of common stock sold pursuant to a purchase agreement we entered into on May 11, 2009. In June 2009, we completed the exchange offers pursuant to which we exchanged approximately \$7.1 million in cash and approximately 24.2 million shares of common stock for approximately \$52.9 million aggregate principal amount of our outstanding various series of convertible notes.

As of March 31, 2009, our total current liabilities were approximately \$36.9 million and we also had a substantial amount of debt outstanding. Subsequent to the exchange offers, the aggregate principal balance of our outstanding various series of convertible notes as of June 30, 2009 was approximately \$66.1 million with interest rates ranging from 4% to 7.5%. We expect that our existing cash and cash equivalents, securities available-for-sale, interest receivable, as well as proceeds received from our offerings to date, but without giving effect to this offering of common stock and warrants, will not provide sufficient working capital to fund our presently anticipated operations through September 2009 and we therefore need to raise additional capital. We also have substantial existing debt. There can be no assurance that we will have sufficient earnings, access to liquidity or cash flow in the future to meet our operating expenses and other obligations, including our debt service obligations.

Additional funds may not be available on acceptable terms, or at all; if we fail to raise significant additional funds we may be forced to cease development of our products and operations.

We may seek to raise additional capital through public or private equity financings, partnerships, joint ventures, dispositions of assets, debt financings or restructurings, bank borrowings or other sources. However, additional funding may not be available on favorable terms or at all and we are subject to certain regulatory and contractual limitations on our financing activities, which may limit our ability to raise additional funding. If adequate funds are not otherwise available, we will further curtail operations significantly, including the delay, modification or cancellation of operations and plans related to pixantrone, OPAXIO and brostallicin, and may be forced to cease operations, liquidate our assets and possibly seek bankruptcy protection.

To obtain additional funding, we may need to enter into arrangements that require us to relinquish rights to certain technologies, drug candidates, products and/or potential markets, such as our transfer of Zevalin assets to RIT Oncology and our subsequent sale of our 50% interest in RIT Oncology.

In addition, some financing alternatives may require us to meet additional regulatory requirements in Italy and the United States, which may increase our costs and adversely affect our ability to obtain financing. To the extent that we raise additional capital through the sale of equity securities, or securities convertible into our equity securities, our shareholders may experience dilution of their proportionate ownership of us.

If we are unable to obtain financing, we may need to implement a reduction in expenses across our operations.

We need substantial additional capital to fund our current operations. If we are unable to secure additional financing on acceptable terms in the near future, we may need to implement a number of additional cost reduction initiatives, such as further reductions in the cost of our workforce and the discontinuation of a number of business

Table of Contents

initiatives to further reduce our rate of cash utilization and extend our existing cash balances. We believe that these additional cost reduction initiatives, if undertaken, would provide us with additional time to continue our pursuit of additional funding sources and also strategic alternatives. In the event that we are unable to obtain financing on acceptable terms and reduce our expenses, we may be required to limit or cease our operations, pursue a plan to sell our operating assets, or otherwise modify our business strategy, which could materially harm our future business prospects.

We are currently in the process of closing down our Italian operations that were used primarily for pre-clinical research and were underutilized due to our current focused business model on the development of late-stage compounds and their commercialization. On May 13, 2009, we entered into an agreement with the unions representing the employees of the Bresso facility in connection with the closure of that facility. The agreement relates to a reduction of our total headcount in Italy by 56 positions in the immediate months, and is expected to save us approximately \$14 million in annual operating expenses going forward. In addition, we have sent notices of termination to the six managers of the Bresso facility and will seek to enter into separate severance arrangements with these managers. We expect to complete the closure of the Bresso facility by October 2009.

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

We were incorporated in 1991 and have incurred a net operating loss every year since our formation. As of March 31, 2009, we had an accumulated deficit of approximately \$1.3 billion. We are pursuing regulatory approval for pixantrone, OPAXIO and brostallicin. We will need to conduct research, development, testing and regulatory compliance activities and undertake manufacturing and drug supply activities, expenses which, together with projected general and administrative expenses, may result in operating losses for the foreseeable future. We may never become profitable, even if we are able to commercialize products currently in development or otherwise.

Our debt and operating expenses exceed our net revenues.

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

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

Due to our need to raise additional financing to fund our operations and satisfy obligations as they become due, our independent registered public accounting firm has included an explanatory paragraph in their reports on our December 31, 2008 and 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.

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

Effective with the opening of trading on January 8, 2009, the U.S. listing of our common stock was transferred to The NASDAQ Capital Market, subject to meeting a minimum market value of listed securities of \$35 million. The NASDAQ Listing Qualifications Panel, or the Panel, approved this transfer after our market capitalization did not comply with the minimum market capitalization required for companies listed on The NASDAQ Global Market, and we presented a plan to the Panel for regaining compliance with the NASDAQ Marketplace Rules. On January 23, 2009, we received an Additional Staff Determination Letter, or the Determination Letter, from The NASDAQ Stock Market, or NASDAQ, that stated the NASDAQ staff had concluded that we had violated Marketplace Rule 4350(i)(1)(C) (now Marketplace Rule 5635), which requires shareholder approval in connection with an acquisition if the issuance or potential issuance is greater than 20% of the pre-acquisition shares outstanding, and that we had at times not complied with Marketplace Rule 4310(c)(17) regarding submission of a Listing of Additional Shares form. On February 18, 2009, we updated the Panel on our plan for regaining compliance and requested an extension of the deadline to regain compliance with the minimum market capitalization requirement for The NASDAQ Capital Market.

Table of Contents

On March 6, 2009, we were notified by NASDAQ that the Panel had determined to continue the listing of our common stock on The NASDAQ Capital Market, subject to the condition that, on or before April 6, 2009, we demonstrate compliance with all applicable standards for continued listing on The NASDAQ Capital Market, including the \$35 million minimum market capitalization requirement. In addition, the Panel issued a public reprimand for our prior failures to comply with the shareholder approval requirements and late filing of Listing of Additional Shares forms. On April 2, 2009, we were notified by NASDAQ that we had complied with the Panel's decision dated March 6, 2009, and, accordingly, the Panel had determined to continue the listing of our common stock on The NASDAQ Stock Market.

As of May 5, 2009, our stock price was below \$1.00. Although NASDAQ has suspended the \$1.00 minimum bid price requirement through July 31, 2009, there can be no assurances that our stock price will be above \$1.00 when the minimum bid price requirement is reinstated, nor can there be any assurance that NASDAQ will further extend the suspension of such requirement. At our Special Meeting of Shareholders held on March 24, 2009, the proposal to allow the Board, in its discretion, to effect a reverse stock split of our common stock was not approved by the shareholders. In the event that our stock price is below \$1.00 when the minimum bid price requirement is reinstated, we may not be able to effect a reverse stock split to increase our stock price if we are unable to obtain shareholder approval of a reverse stock split in the future.

In the event our common stock is delisted from the NASDAQ markets, we currently expect that our common stock would be eligible to be listed on the OTC Bulletin Board or Pink Sheets. We do not know what impact delisting from the NASDAQ markets may have on our listing with the Borsa Italiana.

Although we continue to be listed on The NASDAQ Capital Market, trading in our common stock may be halted or suspended due to market conditions or if NASDAQ, CONSOB or the Borsa Italiana determines that trading in our common stock is inadvisable. Trading in our common stock was halted by the Borsa Italiana on February 10, 2009, and, as a consequence, trading in our common stock was halted by NASDAQ. After we provided CONSOB with additional information and clarification on our business operations and financial condition, as requested, and published a press release containing such information in Italy, CONSOB and NASDAQ lifted the trading halt on our stock. In addition, on March 23, 2009, the Borsa Italiana halted trading of our common stock on the MTA stock market and resumed trading prior to opening of the MTA the next day after we filed a press release regarding the explanatory paragraph in our auditor's reports on our December 31, 2008 and December 31, 2007 consolidated financial statements regarding their substantial doubt as to our ability to continue as a going concern. As a consequence, NASDAQ also halted trading in our common stock on March 23, 2009, but re-initiated trading later that day. Although we file press releases with CONSOB at the end of each month regarding our business and financial condition, CONSOB may make additional inquiries about our business and financial conditions at any time, and there can be no guarantee that CONSOB or NASDAQ will not halt trading in our shares again in the future.

If our common stock ceases to be listed for trading on The NASDAQ Stock Market, the MTA or both for any reason or if trading in our stock is halted or suspended on The NASDAQ Stock Market, the MTA or both, such events may harm our stock price, increase the volatility of our stock price and make it more difficult for investors to buy or sell shares of our common stock. Moreover, if our common stock ceases to be listed for trading on The NASDAQ Stock Market or if trading in our stock is halted or suspended on The NASDAQ Stock Market, we may become subject to certain obligations. In addition, if we are not listed on The NASDAQ Stock Market and/or if our public float falls below \$75 million, we will be limited in our ability to file new shelf registration statements on SEC Form S-3 and/or to fully use one or more registration statements on SEC Form S-3. We have relied significantly on shelf registration statements on SEC Form S-3 for most of our financings in recent years, so any such limitations may have a material adverse effect on our ability to raise the capital we need.

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

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

Table of Contents

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 Italian MTA stock market in Milan, Italy, and we are required to also comply with the rules and regulations of CONSOB, which is the public authority responsible for regulating the Italian securities market, and the Borsa Italiana, which ensures the development of the managed market in Italy. Collectively these entities regulate companies listed on Italy's public markets. Conducting our operations in a manner that complies with all of the 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 of the applicable regulatory regimes. In addition, the Borsa Italiana and CONSOB have made several requests for information asking us to provide additional clarifications about our business operations and financial condition, and we have complied with such requests and have met with CONSOB on several occasions to answer questions. Compliance with Italian regulatory requirements may delay additional issuances of our common stock; we are currently taking steps to attempt to conform to the requirements of the Italian stock exchange and CONSOB to allow such additional issuances.

In addition, under Italian law, we must publish a listing prospectus that has been approved by CONSOB prior to issuing common stock that exceeds, in any twelve month period, 10% of the number of shares of common stock outstanding at the beginning of that period. We have attempted to publish a listing prospectus in Italy to cover our general offerings for the past two years beginning in April 2007. After working with CONSOB to meet its requirements to publish that listing prospectus for the remainder of 2007, we were finally able to publish a listing prospectus in January 2008; however, that listing prospectus was limited to shares to be issued to Société Générale under the Step-Up Equity Financing Agreement we entered into with Société Générale in 2006, which has since terminated. After meeting with CONSOB in 2008 to further discuss its requirements for a more general listing prospectus, we filed a new listing prospectus on December 31, 2008, which was rejected by CONSOB on January 16, 2009. On January 28, 2009, we filed a registration document (*i.e.*, one of the three documents that, according to European Regulation No. 809/2004 and together with our related securities note and summary, constitute a listing prospectus, which can be separately filed, examined and eventually approved by CONSOB).

On July 2, 2009, after several requests of supplements, clarifications and submissions of new drafts of our registration document, CONSOB informed us that the relevant administrative procedure for CONSOB's authorization to publish the registration document had expired since CONSOB alleged that we had not amended the text of the registration document to provide certain information CONSOB had requested. We are planning to file a new draft of the registration document, securities note and summary. Nevertheless, pending the clearance of these documents, which together constitute a complete listing prospectus that will permit the Company to issue common stock in an amount that exceeds in any twelve month period 10% of the number of shares of our common stock outstanding at the beginning of that period, 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 because convertible preferred stock and convertible debt, subject to the provisions of European Directive No. 71/2003 and according to the interpretations of the Committee of European Securities Regulators (CESR), are not subject to the 10% limitation imposed by European Union and Italian law.

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

A portion of our business is currently based in Italy, although we are in the process of shutting down our operations in Italy. However, as long as we continue to have operations in Italy, we are subject to duties and risks arising from doing business in Italy. As long as we continue to have a portion of our business in Italy, we are subject to operational challenges. 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 our business, financial condition and results of operations.

Table of Contents

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

As long as we continue to have operations in Italy, we are exposed to risks associated with foreign currency transactions insofar as we use U.S. dollars to make contract payments denominated in euros or vice versa. As the net positions of our foreign currency transactions might fluctuate, our earnings might be negatively affected. In addition, we are exposed to risks associated with the translation of euro-denominated financial results and accounts into U.S. dollars. Our reporting currency will remain as the U.S. dollar; however, so long as we continue to have operations in Italy, a portion of our consolidated financial obligations will arise in euros. In addition, as long as we continue to have operations in Italy, the carrying value of some of our assets and liabilities will be affected by fluctuations in the value of the U.S. dollar as compared to the euro. Changes in the value of the U.S. dollar as compared to the euro might have an adverse effect on our reported results of operations and financial condition.

We may owe additional amounts for value added taxes related to our operations in Europe.

Our European operations are subject to Value Added Tax, or VAT, which is usually applied to all goods and services purchased and sold throughout Europe. The VAT receivable is approximately \$6.5 million and \$6.3 million as of June 30, 2009 and December 31, 2008, respectively. On March 26, 2009, the Italian Tax Authority, or ITA, issued a notice of assessment to CTI (Europe) based on their audit of VAT returns for the year 2003. The ITA audit concluded that CTI (Europe) did not collect and remit VAT on certain invoices issued to non-Italian clients for services performed by CTI (Europe). In addition, the ITA has issued a pre-assessment of VAT filings for the year 2005 noting findings similar to the 2003 year. The assessment for the year 2003 is approximately \$0.7 million including interest and penalties. We believe that the services were non-VAT taxable consultancy services and that the VAT returns are correct as originally filed and we intend to vigorously defend ourselves against the assessment and request a dismissal on procedural grounds and merits of the case. However, if we are unable to defend ourselves against the year 2003 assessment and if we receive an assessment for subsequent years, including the year 2005, it may harm our results of operations and financial condition.

Our financial condition may be adversely affected if third parties default in the performance of contractual obligations.

Because we do not currently have any marketed products producing revenue, our business is dependent on the performance by third parties of their responsibilities under contractual relationships and, if third parties default on their performance of their contractual obligations, we could suffer significant financial losses and operational problems, which could in turn adversely affect our financial performance, cash flows or results of operations and may jeopardize our ability to maintain our operations.

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

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

We cannot guarantee that we will obtain regulatory approval to manufacture or market any of our drug candidates. Obtaining regulatory approval to market drugs to treat cancer is expensive, difficult and risky.

Preclinical and clinical data can be interpreted in different ways, which could delay, limit or preclude regulatory approval. Negative or inconclusive results or adverse medical events during a clinical trial could delay, limit or prevent regulatory approval.

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

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

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

Table of Contents

We are subject to extensive government regulation.

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

Our products may not be marketed in the United States until they have been approved by the FDA and may not be marketed in other countries until they have received approval from the appropriate agencies. None of our current product candidates have received approval for marketing in any country. In March 2008, we submitted an MAA to the EMEA for OPAXIO. In April 2008, the EMEA accepted the MAA for review and we expect to receive an opinion from the EMEA in the fourth quarter of 2009. In addition, on April 13, 2009, we began submission of a rolling NDA to the FDA for pixantrone to treat relapsed aggressive NHL and completed the submission and requested priority review in June 2009. If priority review status is granted, the FDA could provide a decision on the NDA as early as six months after the final submission of the NDA. Obtaining regulatory approval requires substantial time, effort and financial resources, and we may not be able to obtain approval of any of our products on a timely basis, or at all. In addition, data obtained from clinical trials are susceptible to varying interpretations, and government regulators and our collaborators may not agree with our interpretation of our clinical trial results. If our products are not approved quickly enough to provide net revenues to defray our debt and operating expenses, our business, financial condition and results of operations will be adversely affected.

In the event that we receive marketing approval for any of our product candidates, we will be subject to numerous regulations and statutes regulating the manner of selling and obtaining reimbursement for those products. For example, federal statutes generally prohibit providing certain discounts and payments to physicians to encourage them to prescribe our product. Violations of such regulations or statutes may result in treble damages, criminal or civil penalties, fines or exclusion of us or our employees from participation in federal and state health care programs. Although we have policies prohibiting violations of relevant regulations and statutes, unauthorized actions of our employees or consultants, or unfavorable interpretations of such regulations or statutes may result in third parties or regulatory agencies bringing legal proceedings or enforcement actions against us. Because we will likely need to develop a new sales force for any future marketed products, we may have a greater risk of such violations from lack of adequate training or experience. The expense to retain and pay legal counsel and consultants to defend against any such proceedings would be substantial, and together with the diversion of management's time and attention to assist in any such defense, may negatively affect our business, 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 for the Western District of Washington arising out of their investigation into certain of our prior marketing practices relating to TRISENOX, which was divested to Cephalon Inc. in July 2005. As part of that settlement agreement and in connection with the acquisition of Zevalin, we also entered into a corporate integrity agreement with the Office of Inspector General of the U.S. Department of Health and Human Services, which required us to establish a compliance committee and compliance program and adopt a formal code of conduct.

Table of Contents

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

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

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

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

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

Many of our competitors, particularly the multinational pharmaceutical companies, either alone or together with their collaborators, have substantially greater financial resources and substantially larger 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 current or future 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;

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

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

S-15

Table of Contents

demand for our products. In addition, in almost all European markets, pricing and choice of prescription pharmaceuticals are subject to governmental control. Therefore, the price of our products and their reimbursement in Europe will be determined by national regulatory authorities.

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

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

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

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

be found ineffective or cause harmful side effects during preclinical testing or clinical trials;

fail to receive necessary regulatory approvals;

be difficult to manufacture on a scale necessary for commercialization;

be uneconomical to produce;

fail to achieve market acceptance; or

be precluded from commercialization by proprietary rights of third parties.

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

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

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

Table of Contents

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 other from infringing on our proprietary rights.

When polymers are linked, or conjugated, to drugs, the results are referred to as polymer-drug conjugates. We are developing drug delivery technology that links chemotherapy to biodegradable polymers. For example, OPAXIO is paclitaxel, the active ingredient in Taxol[®], one of the world's best selling cancer drugs, linked to polyglutamate. We may not receive a patent for all of our polymer-drug conjugates and we may be challenged by the holder of a patent covering the underlying drug and/or methods for its use or manufacture.

The patent position of biopharmaceutical firms generally is highly uncertain and involves complex legal and factual questions. The U.S. Patent and Trademark Office has not established a consistent policy regarding the breadth of claims that it will allow in biotechnology patents. If it allows broad claims, the number and cost of patent interference proceedings in the United States and the risk of infringement litigation may increase. If it allows narrow claims, the risk of infringement may decrease, but the value of our rights under our patents, 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 upon the intellectual property rights of others, which may cause us to engage in costly litigation and, if unsuccessful, could cause us to pay substantial damages and prohibit us from selling our products.

We attempt to monitor patent filings for patents that may be relevant to our products and product candidates in an effort to guide the design and development of our products to avoid infringement but have not conducted an exhaustive search. We may not be able to successfully challenge the validity of these patents and could be required to pay substantial damages, possibly including treble damages, for past infringement and attorneys' fees if it is ultimately determined that our products infringe upon 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.

Table of Contents

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

Our amended and restated articles of incorporation require that a quorum, consisting of one-third of the outstanding shares of voting stock, be represented in person or by proxy in order to transact business at a meeting of our shareholders. In addition, amendments to our amended and restated articles of incorporation, such as an amendment to increase our authorized capital stock, require the approval of a majority of our outstanding shares. A substantial majority of our common shares are held by Italian institutions and, under Italian laws and regulations, it is difficult to communicate with the beneficial holders of those shares to obtain votes. In 2006, when a quorum required a majority of the outstanding shares of our voting stock be represented in person or by proxy, we scheduled two annual meetings of shareholders, but were unable to obtain quorum at either meeting. Following that failure to obtain quorum, we contacted certain depository banks in Italy where significant numbers of shares of our common stock were held and asked them to cooperate by making a book-entry transfer of their share positions at Monte Titoli to their U.S. correspondent bank, who would then transfer the shares to an account of the Italian bank at a U.S. broker-dealer that is an affiliate of that bank. Certain of the banks contacted agreed to make the share transfer pursuant to these arrangements as of the record date of the meeting, subject to the relevant beneficial owner taking no action to direct the voting of such shares. Under Rule 452 of the New York Stock Exchange, the U.S. broker-dealer may vote shares absent direction from the beneficial owner on certain matters, such as the uncontested election of directors, an amendment to our amended and restated articles of incorporation to increase authorized shares that are to be used for general corporate purposes, and the ratification of our auditors. As a result of this custody transfer, we were able to hold special meetings of the shareholders in April 2007, January 2008 and March 2009 and annual meetings of the shareholders in September 2007 and June 2008. At the meeting in June 2008, our shareholders approved a proposal to reduce our quorum requirement from a majority of outstanding voting shares to one-third of outstanding voting shares. However, obtaining a quorum at future meetings even at the lower threshold and obtaining necessary shareholder approvals will depend in part upon the willingness of the Italian depository banks to continue participating in the custody transfer arrangements, and we cannot be assured that those banks that have participated in the past will continue to participate in custody transfer arrangements in the future. We are continuing to explore other alternatives to achieve quorum for and shareholder representation at our meetings; however, we cannot be certain that we will find an alternate method if we are unable to continue to use the custody transfer arrangements. As a result, we may be unable to obtain a quorum at future annual or special meetings of shareholders or obtain shareholder approval of proposals when needed.

If we are unable to obtain a quorum at our shareholder meetings and thus fail to get shareholder approval of corporate actions, such failure could have a materially adverse effect on us. In addition, brokers may only vote on those matters for which broker discretionary voting is allowed under Rule 452 of the New York Stock Exchange, 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 material adverse effect on us. For example, a proposal to approve a reverse stock split failed to receive sufficient votes to pass at the March 2009 shareholders meeting.

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

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

Table of Contents

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

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

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

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

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 U.S. and/or foreign regulatory authorities where our products will be tested and/or marketed. While the FDA and other regulatory authorities maintain oversight for cGMP compliance of drug manufacturers, contract manufacturers and contract service providers may at times violate cGMPs. The FDA and other regulatory authorities may take action against a contract manufacturer who violates cGMPs. One of our products under development, OPAXIO, has a complex manufacturing process and supply chain, which may prevent us from obtaining a sufficient supply of drug product for the clinical trials and commercial activities currently planned or underway on a timely basis, if at all. The active pharmaceutical ingredients and drug products for pixantrone and brostallicin are both manufactured by a single vendor. Finished product manufacture and distribution for both pixantrone and brostallicin are to be manufactured and distributed by different single vendors. We are currently disputing our right to cancel the exclusive manufacturing contract between us and the former manufacturer of pixantrone. We assert multiple grounds for terminating this exclusive manufacturing agreement, which the former manufacturer disputes.

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

We divested our commercial product, TRISENOX, in July 2005 and fully divested our commercial product, Zevalin, in March 2009. Currently, we do not have a marketed product, and unless we are able to develop one of our product candidates, such as pixantrone, into an approved commercial product, we will not generate any significant revenues from product sales, royalty payments, license fees or otherwise. Pixantrone, OPAXIO and brostallicin are currently in clinical trials; these clinical trials may not be successful and, even if they are, we may not be successful in developing any of them into a commercial product. For example, our STELLAR phase III clinical trials for OPAXIO for the treatment of non-small cell lung cancer failed to meet their primary endpoints. In addition, a number of companies in the pharmaceutical industry, including us, have suffered significant setbacks in advanced clinical trials, even after reporting promising results in earlier trials. We will need to commit significant time and resources to develop these and any additional product candidates. Our product candidates will be successful only if:

our product candidates are developed to a stage that will enable us to commercialize them or sell related marketing rights to pharmaceutical companies;

we are able to commercialize product candidates in clinical development or sell the marketing rights to third parties; and

our product candidates, if developed, are approved by the regulatory authorities.

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

Table of Contents

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

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

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

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

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

we may not obtain authorization to permit product candidates that are already in the preclinical development phase to enter the human clinical testing phase;

authorized preclinical or clinical testing may require significantly more time, resources or expertise than originally expected to be necessary;

clinical testing may not show potential products to be safe and efficacious and, as with many drugs, may fail to demonstrate the desired safety and efficacy characteristics in human clinical trials;

clinical testing may show that potential products are not appropriate for the specific indication for which they are being tested;

the results from preclinical studies and early clinical trials may not be indicative of the results that will be obtained in later-stage clinical trials;

we or regulatory authorities may suspend clinical trials at any time on the basis that the participants are being exposed to unacceptable health risks or for other reasons; and

completion of clinical trials depends on, among other things, the number of patients available for enrollment in a particular trial, which is a function of many factors, including the number of patients with the relevant conditions, the nature of the clinical testing, the proximity of patients to clinical testing centers, the eligibility criteria for tests as well as competition with other clinical testing programs involving the same patient profile but different treatments.

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

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

Table of Contents

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

We have entered into collaborative arrangements with third-parties to develop and/or commercialize product candidates and are currently seeking additional collaborations. For example, we entered into an agreement with the Gynecologic Oncology Group to perform a phase III trial of OPAXIO in patients with ovarian cancer. Additional collaborations might be necessary in order for us to fund our research and development activities and third-party manufacturing arrangements, seek and obtain regulatory approvals and successfully commercialize our existing and future product candidates. If we fail to enter into additional collaborative arrangements or fail to maintain our existing collaborative arrangements, the number of product candidates from which we could receive future revenues would decline. For example, in 2005 we sold our product TRISENOX to Cephalon and, pursuant to the terms of the purchase agreement under which TRISENOX was sold, we are entitled to receive milestone payments upon the approval by the FDA of new labeled uses for TRISENOX; however, Cephalon may decide not to submit any additional information to the FDA to apply for label expansion of TRISENOX, in which case we would not receive a milestone payment under the agreement.

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

collaborative arrangements may not be on terms favorable to us;

disagreements with partners may result in delays in the development and marketing of products, termination of our collaboration agreements or time consuming and expensive legal action;

we cannot control the amount and timing of resources partners devote to product candidates or their prioritization of product candidates and partners may not allocate sufficient funds or resources to the development, promotion or marketing of our products, or may not perform their obligations as expected;

partners may choose to develop, independently or with other companies, alternative products or treatments, including products or treatments which compete with ours;

agreements with partners may expire or be terminated without renewal, or partners may breach collaboration agreements with us;

business combinations or significant changes in a partner's business strategy might adversely affect that partner's willingness or ability to complete its obligations to us; and

the terms and conditions of the relevant agreements may no longer be suitable.

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

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

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

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

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

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

We may be unable to use our net operating losses.

We have substantial tax loss carryforwards for U.S. federal income tax purposes. As a result of prior changes in the stock ownership of the Company, our ability to use such carryforwards to offset future income or tax liability is limited under section 382 of the Internal Revenue Code of 1986, as amended. Moreover, future changes in the ownership of our stock, including those resulting from the issuance of shares of common stock upon exercise of the warrants offered in this offering, may further limit our ability to use our net operating losses.

Table of Contents

USE OF PROCEEDS

We estimate that the net proceeds of this offering, after deducting estimated underwriting discounts and commissions and our estimated offering expenses, and excluding the proceeds, if any, from the exercise of the warrants issued in this offering and any exercise of the underwriter's over-allotment option, will be approximately \$35.0 million.

We currently intend to use the net proceeds from this offering for working capital and for general corporate purposes, which may include, among other things, paying interest on and/or retiring portions of our outstanding debt, funding research and development, preclinical and clinical trials, the preparation and filing of new drug applications and general working capital. Set forth below are details of certain of our outstanding indebtedness that we may retire, in whole or in part, with the net proceeds from this offering (principal amounts as of June 30, 2009):

our approximately \$43.4 million 4% Convertible Senior Subordinated Notes due 2010, which mature on July 1, 2010;

our approximately \$1.5 million 6.75% Convertible Senior Notes due 2010, which mature on October 31, 2010;

our approximately \$10.3 million 7.5% Convertible Senior Notes due 2011, which mature on April 30, 2011; and

our approximately \$10.9 million 5.75% Convertible Senior Notes due 2011, which mature on December 15, 2011.

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.

Table of Contents**PRICE RANGE OF COMMON STOCK**

Our common stock is listed on The NASDAQ Capital Market and on the MTA (formerly the MTAX) in Italy under the symbol CTIC. Prior to January 8, 2009, our common stock was listed on The NASDAQ Global Market. The following table sets forth, for the fiscal quarters indicated, the high and low reported sale prices of shares of our common stock as reported on The NASDAQ Global Market, and, as of January 8, 2009, The NASDAQ Capital Market.

	High	Low
2006		
First Quarter	\$ 93.60	\$ 71.60
Second Quarter	\$ 80.80	\$ 52.40
Third Quarter	\$ 101.20	\$ 44.80
Fourth Quarter	\$ 78.00	\$ 56.80
2007		
First Quarter	\$ 72.40	\$ 56.40
Second Quarter	\$ 75.60	\$ 28.50
Third Quarter	\$ 49.70	\$ 30.00
Fourth Quarter	\$ 38.90	\$ 15.90
2008		
First Quarter	\$ 19.90	\$ 4.70
Second Quarter	\$ 9.60	\$ 4.60
Third Quarter	\$ 4.90	\$ 0.58
Fourth Quarter	\$ 0.89	\$ 0.12
2009		
First Quarter	\$ 0.97	\$ 0.05
Second Quarter	\$ 2.23	\$ 0.27
Third Quarter (through July 21, 2009)	\$ 1.72	\$ 1.30

As our market capitalization did not comply with the minimum market capitalization requirements for companies listed on The NASDAQ Global Market, we had a hearing before a NASDAQ Listing Qualifications Panel, or the Panel, in November 2008 and presented a plan for regaining compliance with the NASDAQ Marketplace Rules. The Panel approved a transfer of our listing to The NASDAQ Capital Market effective with the opening of trading on January 8, 2009, subject to our evidencing compliance with all applicable requirements for continued listing on The NASDAQ Capital Market, including a minimum market value of listed securities of \$35 million or its alternative, as set forth in NASDAQ Marketplace Rule 4103(c)(3), by February 12, 2009. On March 6, 2009, we were notified by NASDAQ that the NASDAQ Listing Qualifications Panel had determined to continue the listing of our common stock on The NASDAQ Capital Market, subject to the condition that, on or before April 6, 2009, we demonstrate compliance with all applicable standards for continued listing on The NASDAQ Capital Market, including the \$35 million market value of listed securities requirement or one of its alternatives. In addition, the Panel issued a public reprimand for our prior failures to comply with the shareholder approval requirements and late filing of Listing of Additional Shares forms. On April 2, 2009, we were notified by NASDAQ that we had complied with the Panel's decision dated March 6, 2009 and, accordingly, the Panel had determined to continue the listing of our common stock on The NASDAQ Stock Market.

As of May 5, 2009, our stock price was below \$1.00. Although NASDAQ has suspended the \$1.00 minimum bid price requirement through July 31, 2009, there can be no assurances that our stock price will be above \$1.00 when the minimum bid price requirement is reinstated, nor can there be any assurance that NASDAQ will further extend the suspension of such requirement. At our Special Meeting of Shareholders held on March 24, 2009, the proposal to allow the Board, in its discretion, to effect a reverse stock split of our common stock was not approved by the shareholders. In the event that our stock price is below \$1.00 when the minimum bid price requirement is reinstated, we may not be able to effect a reverse stock split to increase our stock price if we are unable to obtain shareholder approval of a reverse stock split in the future.

On July 21, 2009, the last reported sale price of our common stock on The NASDAQ Capital Market was \$1.51 per share. As of June 30, 2009, there were approximately 185 shareholders of record of our common stock.

Table of Contents

DIVIDEND POLICY

We have never declared or paid any cash dividends on our common stock and do not currently anticipate declaring or paying cash dividends on our common stock in the foreseeable future. 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.

S-25

Table of Contents**DILUTION**

If you purchase shares of common stock and warrants in this offering, your interest will be diluted to the extent the of difference between the public offering price per share and the net tangible book value per share of our common stock after this offering. We calculate net tangible book value per share by dividing the net tangible book value, tangible assets less total liabilities, by the number of outstanding shares of common stock.

Our net tangible book value as of March 31, 2009 was \$(132.2) million, or \$(0.40) per share of common stock. After giving effect to the sale of 29,332,107 shares of common stock and warrants to purchase 7,333,027 shares of common stock by us at a public offering price of \$1.30 per share of common stock and warrant to purchase .25 shares of common stock (and excluding shares of common stock and any proceeds received upon exercise of the warrants or any exercise of the underwriter's over-allotment option), less the underwriting discounts and commissions and our estimated offering expenses, our as adjusted net tangible book value as of March 31, 2009 would have been approximately \$(97.3) million, or approximately \$(0.27) per share of common stock. This represents an immediate increase in the pro forma net tangible book value of \$0.13 per share to existing stockholders and an immediate dilution of \$1.57 per share to investors in this offering. The following table illustrates this per share dilution:

Public offering price per share of common stock and warrant to purchase .25 shares of common stock	\$1.30
Pro forma net tangible book value per share as of March 31, 2009	\$(0.40)
Increase per share attributable to new investors	0.13
Pro forma net tangible book value per share after this offering	(0.27)
Dilution per share to new investors	1.57

The above discussion is based on 329,477,484 shares of common stock outstanding as of March 31, 2009 and excludes options, warrants, unvested share awards and rights, convertible debt and convertible preferred stock aggregating 11,397,079 common equivalent shares as of March 31, 2009.

In addition, the above discussion excludes a series of transactions occurring after March 31, 2009 and prior to the date of this prospectus supplement, including, without limitation, the transactions described under the heading "Summary Recent Developments Debt and Equity Restructurings" and occurring after March 31, 2009.

Table of Contents

DESCRIPTION OF CAPITAL STOCK

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

General

We are authorized to issue 800,000,000 shares of common stock, no par value, and 10,000,000 shares of preferred stock, no par value. As of July 21, 2009, there were 502,327,652 shares of common stock outstanding, warrants to purchase approximately 20.8 million shares of common stock outstanding and no shares of preferred stock outstanding.

On April 15, 2007, we effected a one-for-four reverse stock split of our common stock and on August 31, 2008, we effected a 1-for-10 reverse split of our common stock.

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 our liquidation, dissolution or winding up, 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 our common stock. All outstanding shares of common stock are fully paid and nonassessable. The rights, preferences and privileges of the holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate in the future.

General Description of Preferred Stock

Our 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 our 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 our 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 our common stock;

diluting the voting power of our common stock;

impairing the liquidation rights of our common stock; or

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

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

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

Table of Contents

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

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

Transfer Agent and Registrar

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

Table of Contents

DESCRIPTION OF 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 terms set forth in the Common Stock Purchase Warrant to be filed as an exhibit to our Current Report on Form 8-K, which we expect to file with the SEC in connection with this offering.

General

The warrants are exercisable immediately and expire nine months from the date of issuance. The warrants will be exercisable, 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 of common stock being acquired upon exercise of the warrants. However, if at the time of exercise there is no effective registration statement registering the issuance of the shares of common stock issuable upon exercise of the warrants to the holder and all such shares are not then registered for resale by the holder, the holder may exercise the warrants by means of a cashless exercise or net exercise. The warrants will not be listed on any national securities exchange.

The exercise price per share of common stock purchasable upon exercise of the warrants is \$1.70 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 in one transaction or a series of related transactions, tender offer or exchange offer with respect to our common stock pursuant to which holders of our common stock are permitted to tender or exchange a material portion of shares of our common stock for other securities, cash or property, or reclassification of our common stock or any compulsory share exchange pursuant to which our common stock is effectively converted into or exchanged for other securities, cash or property, 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 the warrants would have been entitled to receive upon the occurrence of the fundamental transaction as if the warrant had been exercised immediately before the fundamental transaction. In addition, if any holder of common stock is given a choice of consideration to be received in the fundamental transaction, then the holders of the warrants shall be given the same choice upon the exercise of the warrants following the fundamental transaction.

As of July 21, 2009, other warrants to purchase approximately 20.8 million shares of common stock were outstanding.

Table of Contents

CERTAIN U.S. FEDERAL INCOME TAX CONSIDERATIONS

All purchasers of common stock and warrants in this offering are advised to consult their own tax advisors regarding the federal, state, local and foreign tax consequences of the purchase, ownership and disposition of our common stock and the shares of common stock issuable upon exercise of the warrants in their particular situations.

S-30

Table of Contents**UNDERWRITING**

Subject to the terms and conditions of an underwriting agreement, dated July 22, 2009, we have agreed to sell to Rodman & Renshaw, LLC on a firm commitment basis the number of shares and warrants offered in this offering set forth below, at the public offering price, less the underwriting discount set forth on the cover page of this prospectus.

Name	Number of Shares	Number of Warrants
Rodman & Renshaw, LLC	29,332,107	7,333,027
Total	29,332,107	7,333,027

The underwriting agreement provides that the obligation of the underwriter to pay for and accept delivery of the shares of common stock and warrants offered by this prospectus supplement, are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriter is obligated to take and pay for all of the shares of common stock offered by this prospectus supplement if any such shares are taken. However, the underwriter is not required to take or pay for the shares of common stock covered by the underwriter's over-allotment option. Furthermore, the underwriter's obligations are subject to the continued listing on The NASDAQ Capital Market of our shares of common stock and to various other customary conditions, representations and warranties contained in the underwriting agreement, such as receipt by the underwriters of officers' certificates and legal opinions of our counsel.

We have granted the underwriter an option, exercisable for 30 days after this offering, to purchase up to an additional 15% of the shares of common stock and warrants sold in the offering (4,399,816 additional shares of common stock and warrants to purchase up to 1,099,954 additional shares of common stock) at the public offering price less the underwriting discount, solely to cover over-allotments, if any, made in connection with the offering of the shares of common stock and warrants offered by this prospectus supplement.

We have agreed to issue the underwriter a warrant to purchase up to a total of 586,642 shares of common stock (2% of the shares of common stock sold prior to exercise of the over-allotment option) in exchange for \$100 cash. The shares issuable upon exercise of this warrant are identical to those offered by this prospectus. This warrant is exercisable at \$1.70 per share, commencing on a date which is six months from the issuance date and expiring five years from the closing date of this offering.

The following table summarizes the per-share and total purchase price, underwriting discounts and commissions, and proceeds before expenses to us, based on the public offering price of \$1.30 per share and warrant in connection with this offering. The information assumes either no exercise or full exercise by the underwriter of the over-allotment option.

	Per	Total	
	Share and Warrant	Without	With
		Over-Allotment	Over-Allotment
Purchase Price	\$ 1.300	\$ 38,131,739.00	\$ 43,851,499.00
Underwriting discounts and commissions paid by us ⁽¹⁾⁽²⁾	\$ 0.065	\$ 1,906,586.90	\$ 2,192,575.00
Proceeds, before expenses, to us	\$ 1.235	\$ 36,225,152.10	\$ 41,658,924.00

- (1) Excludes the five year representative warrant sold to the underwriter exercisable at \$1.70 per share following the six month anniversary of the date of issuance.
- (2) Excludes an expense allowance of up to \$100,000 consisting of \$75,000 for legal fees and expenses of the underwriter and up to \$25,000 of accountable expense reimbursements payable to the underwriter.

Table of Contents

The estimated offering expenses payable by us, excluding the underwriting discounts and commissions and any exercise of the underwriter's over-allotment option, will be approximately \$1.2 million, which includes various other fees associated with registering and listing the shares of common stock, and up to \$100,000 that we have agreed to reimburse the underwriter for the fees incurred by it in connection with this offering. In connection with this offering, we will issue to the underwriter a warrant to purchase up to 586,642 shares of common stock with an exercise price of \$1.70 per share. The estimated offering expenses also include a cash fee equal to 2% of the aggregate gross proceeds received by us, plus warrants to purchase 293,321 shares of common stock with an exercise price of \$1.56 per share at closing by us to Trout Capital LLC for financial advisory services.

The public offering price for the shares and warrants was determined by negotiation between us and the underwriter. The principal factors considered in determining the public offering price of the shares and warrants included:

the information in this prospectus supplement and the accompanying prospectus and otherwise available to the underwriter;

the history and the prospects for the industry in which we will compete;

the valuation of our company based on, among other factors, the offering prices of our recent private offerings;

our current financial condition and the prospects for our future cash flows and earnings;

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

the recent market prices of, and the demand for, publicly-traded securities of generally comparable companies; and

the public demand for our securities in this offering.

The underwriting agreement will be included as an exhibit to a Current Report on Form 8-K that will be filed with the SEC in connection with this offering.

We are subject to a lock-up agreement that prohibits us from offering for sale, selling, contracting to sell, granting any option for the sale of, transferring or otherwise disposing of any shares of our common stock, options or warrants to acquire shares of our common stock or any security or instrument related to such common stock, option or warrant for a period of 30 days following the date of this prospectus supplement without the prior written consent of Rodman & Renshaw, LLC. We also have granted Rodman & Renshaw, LLC a right of first refusal over future financings for a period of two months following the expiration of the lock-up period. The lock-up agreement and right of first refusal do not apply to the shares of common stock and warrants or the issuance of shares of common stock upon exercise of the warrants offered hereby, issuances of shares of common stock upon exercise of the warrants to be issued to Rodman & Renshaw, LLC in connection with this offering, issuances of shares of common stock upon exchange or conversion of currently outstanding convertible notes, issuances of shares of common stock upon the exercise of currently outstanding warrants or amendments to the warrant agreements related thereto, granting options to acquire securities under our existing stock option plans or issuing shares of common stock upon the exercise of outstanding awards under our existing stock option plans, issuing shares of common stock pursuant to agreements in effect as of the date hereof or amendments related thereto, issuing shares of common stock in connection with strategic acquisitions or issuing shares of common stock subject to shareholder approval.

In connection with this offering, Rodman & Renshaw, LLC has agreed that it will not offer or sell shares of common stock or warrants in Italy without our prior consent.

Our common stock is quoted on The NASDAQ Capital Market and on the MTA stock market in Italy under the symbol CTIC. The warrants will not be listed on any national securities exchange.

Table of Contents

In order to facilitate the offering of shares of common stock, the underwriter may engage in transactions that stabilize, maintain or otherwise affect the price of the shares of common stock. Specifically, the underwriter may sell more shares of common stock than it is obligated to purchase under the underwriting agreement, creating a short position. A short sale is covered if the short position is no greater than the number of shares of common stock available for purchase by the underwriter under the over-allotment option. The underwriter can close out a covered short sale by exercising the over-allotment option or purchasing shares of common stock in the open market. In determining the source of shares of common stock to close out a covered short sale, the underwriter will consider, among other things, the open market price of shares of common stock compared to the price available under the over-allotment option. The underwriter may also sell shares of common stock in excess of the over-allotment option, creating a naked short position. The underwriter must close out any naked short position by purchasing shares of common stock in the open market. A naked short position is more likely to be created if the underwriter is concerned that there may be downward pressure on the price of the shares of common stock in the open market after pricing that could adversely affect investors who purchase in this offering. As an additional means of facilitating this offering, the underwriter may bid for, and purchase, shares of common stock in the open market to stabilize the price of the shares of common stock.

The underwriter also may impose a penalty bid. Penalty bids permit the underwriters to reclaim a selling concession from a syndicate member if the underwriter repurchases shares of common stock and warrants originally sold by that syndicate member in order to cover syndicate short positions or make stabilizing purchases.

Any of these activities may raise or maintain the market price of the shares of common stock above independent market levels or prevent or retard a decline in the market price of the shares of common stock. The underwriter is not required to engage in these activities, which may be effected in The NASDAQ Capital Market or otherwise and, if commenced, may end any of these activities at any time.

We and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act, or to contribute to payments that the underwriter may be required to make in respect of those liabilities.

This prospectus supplement in electronic format may be made available on the websites maintained by Rodman & Renshaw, LLC and Rodman & Renshaw, LLC may distribute prospectuses and prospectus supplements electronically.

LEGAL MATTERS

Certain legal matters in connection with the securities offered hereby will be passed upon for us by O Melveny & Myers LLP of San Francisco, California. Certain legal matters relating to Washington law will be passed upon for us by Karr Tuttle Campbell of Seattle, Washington. Weinstein Smith LLP and Sichenzia Ross Friedman Ference LLP of New York, New York, are acting as counsel for Rodman & Renshaw, LLC.

EXPERTS

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

Table of Contents

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

SEC rules allow us to incorporate by reference into this prospectus much of the information we file with the SEC, which means that we can disclose important information to you by referring you to those publicly available documents. The information that we incorporate by reference in this prospectus is considered to be part of this prospectus. This prospectus incorporates by reference the documents listed below and any future filings we make with the SEC under Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act (in each case, other than those documents or the portions of those documents not deemed to be filed) until the offering of the securities under the registration statement is terminated or completed:

our Annual Report on Form 10-K for the fiscal year ended December 31, 2008;

our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2009;

our definitive Proxy Statement on Schedule 14A, dated and filed with the SEC on January 14, 2009 for a Special Meeting of Shareholders, as amended by Amendment No. 1 to the definitive Proxy Statement on Schedule 14A, dated as of February 4, 2009 and filed with the SEC on February 5, 2009 and Definitive Additional Materials filed with the SEC on January 26, 2009, February 27, 2009 and March 9, 2009;

our Current Reports on Form 8-K filed on January 6, 2009, January 8, 2009, January 29, 2009, February 9, 2009, February 23, 2009, March 6, 2009, March 16, 2009 (Items 1.01 and 2.01 only), March 27, 2009, April 13, 2009, April 14, 2009, April 17, 2009, May 12, 2009 (Item 1.01 only), May 15, 2009, May 20, 2009, May 28, 2009, May 29, 2009, June 10, 2009, June 26, 2009 and July 7, 2009; and

the description of our capital stock contained in our Registration Statements on Form 10 filed with the SEC on June 27, 1996, including any amendment or reports filed for the purpose of updating that description.

Because we are incorporating by reference future filings with the SEC, this prospectus is continually updated and those future filings may modify or supersede some of the information included or incorporated by reference in this prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus or in any document previously incorporated by reference have been modified or superseded.

You may request a copy of these filings, at not cost, by writing or telephoning us at the following address:

Cell Therapeutics, Inc.

501 Elliott Avenue West, Suite 400

Seattle, Washington 98119

(206) 282-7100

Attention: Investor Relations

Table of Contents

PROSPECTUS

\$150,000,000

Making cancer more treatable

Common Stock

Preferred Stock

Debt Securities

Warrants

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

We will provide specific terms of these securities in one of 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 Capital Market and on the MTA stock market in Italy under the symbol CTIC . On April 3, 2009, the last reported sale price of our common stock on The NASDAQ Capital Market was \$0.39.

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

Investing in our securities involves a high degree of risk. See Risk Factors beginning on page 12 of 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 6, 2009

Table of Contents**TABLE OF CONTENTS**

	Page
<u>ABOUT THIS PROSPECTUS</u>	1
<u>SUMMARY</u>	2
<u>FINANCIAL RATIOS</u>	10
<u>SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS</u>	11
<u>RISK FACTORS</u>	12
<u>USE OF PROCEEDS</u>	27
<u>DIVIDEND POLICY</u>	27
<u>DESCRIPTION OF CAPITAL STOCK</u>	28
<u>DESCRIPTION OF DEBT SECURITIES</u>	29
<u>DESCRIPTION OF WARRANTS</u>	36
<u>LEGAL OWNERSHIP OF SECURITIES</u>	39
<u>PLAN OF DISTRIBUTION</u>	43
<u>LEGAL MATTERS</u>	45
<u>EXPERTS</u>	45
<u>WHERE YOU CAN FIND MORE INFORMATION</u>	45

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.

Table of Contents

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 \$150,000,000. 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 the securities offered by this prospectus. You should read this entire prospectus carefully, including the documents that we incorporate by reference into this prospectus. Unless otherwise indicated, CTI, Company, we, us, our and similar terms refer to Cell Therapeutics, Inc. and its subsidiaries.

Our Company

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

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

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

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

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

Table of Contents

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

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

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

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

We are also developing OPAXIO as potential maintenance therapy for women with advanced stage ovarian cancer who achieve a complete remission following first-line therapy with paclitaxel and carboplatin. This study, the GOG0212 trial, is under the control of the Gynecologic Oncology Group, or GOG, and is expected to enroll 1,100 patients by early 2012. Based on the number of events in the database, we are requesting an interim analysis be conducted by the GOG in late 2009. If the GOG agrees to this timing and the interim analysis is successful, it could lead to an NDA filing in 2010.

Table of Contents

On March 15, 2009, we completed the divestiture of our interest in Zevalin® (ibritumomab tiuxetan), a form of cancer therapy called radioimmunotherapy which is indicated for treatment of relapsed or refractory, low-grade or follicular B-cell NHL, including patients with rituximab refractory follicular NHL. Zevalin was approved by the FDA in February 2002 as the first radioimmunotherapeutic agent for the treatment of NHL. We acquired the U.S. development, sales and marketing rights to Zevalin from Biogen Idec Inc., or Biogen, pursuant to an asset purchase agreement in December 2007. In December 2008, we formed a 50/50 owned joint venture named RIT Oncology, LLC, or RIT Oncology, with Spectrum Pharmaceuticals, Inc., or Spectrum to commercialize and develop Zevalin in the United States. We contributed all assets owned by us and exclusively related to Zevalin to that joint venture and received an initial payment of \$7.5 million at the closing of the initial formation of the joint venture and an additional \$7.5 million in early January 2009. Additionally, we were granted a right to receive up to an additional \$15 million in product sales milestone payments upon achievement of certain revenue targets.

Under the terms of the amended and restated operating agreement for the joint venture, we held an option to sell to Spectrum our 50% interest in RIT Oncology (the Interest). Our board of directors made a strategic decision to focus our resources on developing pixantrone and our other products, and because the option provided the most viable source for non-dilutive financing, in February 2009, we exercised the option to sell our Interest to Spectrum and in March, 2009 closed the transaction to fully divest our ownership in Zevalin for approximately \$16.5 million. In consideration for the Interest, on March 2, 2009, we received gross proceeds of \$6.5 million (less the amount of a consent fee paid to Biogen), and following the closing, on March 16, 2009, Spectrum funded into escrow \$10 million, of which \$6.5 million was released to us on April 3, 2009 and \$3.5 million, subject to certain adjustments for among other things payables determined to be owed between us and RIT Oncology, will be released to us on April 15, 2009. As part of the transaction, we also agreed to forego the right to receive the \$15 million in product sales milestone payments provided to us in connection with the original transaction establishing the joint venture. Additionally, as part of the closing, we extended the terms of the existing master services agreement with RIT Oncology and have agreed to perform transition services for the benefit of the Zevalin business until May 31, 2009.

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

A phase II study of brostallicin in relapsed/refractory soft tissue sarcoma met its predefined activity and safety hurdles and resulted in a first-line phase II study that is currently being conducted by the European Organization for Research and Treatment of Cancer, or EORTC. Planned enrollment for this study was completed in August 2008 and the EORTC plans to conduct the final data analysis in 2009. Brostallicin has also demonstrated synergy with new targeted agents as well as established treatments in preclinical trials; consequently, we began a multi-arm combination study with brostallicin and other agents, including Avastin (bevacizumab) which was substantially completed in the fourth quarter of 2008.

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

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

Table of Contents

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

CTI and OPAXIO are our proprietary marks. All other product names, trademarks and trade names referred to in this prospectus are the property of their respective owners.

Recent Developments

Debt and Equity Restructurings

We have a substantial amount of debt outstanding, and our annual interest expense with respect to our debt is significant. Beginning in December 2007 and continuing through 2008, we completed restructurings of various series of our convertible notes which retired a portion of such debt, extended the maturity date on certain such debt and involved the issuance of additional convertible notes and shares of common stock to holders of the exchanged notes. As of December 31, 2008 we had an aggregate principal balance of approximately \$142.2 million in convertible notes with interest rates ranging from 4% to 10%. On March 30, 2009 approximately \$5.3 million principal amount of our 9% Convertible Senior Notes due 2012 were converted at the option of the holder of such notes into 372,340 shares of our common stock and such holder also became entitled to an interest make-whole payment of \$945,000 in accordance with the terms of such notes.

On December 5, 2008, we announced via press release that our Board of Directors had authorized a modified Dutch tender offer seeking to repurchase a portion or all of an aggregate of \$124 million of our outstanding 4% Convertible Senior Subordinated Notes due 2010, 5.75% Convertible Senior Notes due 2011, 6.75% Convertible Senior Notes due 2010, 7.5% Convertible Senior Notes due 2011 and 9% Convertible Senior Notes due 2012 at a significant discount to the notes par value. We continue to desire to pursue the tender offer as part of our recapitalization plan, but as of April 6, 2009 the tender offer for this debt has not commenced. The tender offer, if commenced, will be made solely by and subject to the terms and conditions set forth in a Schedule TO (including the Offer to Purchase and related Letter of Transmittal) that we will file with the SEC.

In early February 2009, we issued 6,702 shares of new Series F preferred stock in exchange for certain shares of our Series A 3% convertible preferred stock, our Series B 3% convertible preferred stock and our Series C 3% convertible preferred stock. On April 1, 2009, the Series F preferred stock became convertible into common stock and on April 1 and 2, 2009 all of the holders of the Series F preferred stock exercised their option to convert their shares of Series F preferred stock into shares of common stock at a conversion price of \$0.14 per share, resulting in the issuance of 47,871,425 shares of Common Stock to these holders. As of April 5, 2009, 100 shares of our Series A 3% convertible preferred stock and 1,000 shares of our Series D 7% convertible preferred stock were outstanding.

Restructuring of Resources

As noted above, on March 15, 2009, we completed the divestiture of our interest in RIT Oncology, a 50/50 owned joint venture with Spectrum established to commercialize and develop Zevalin in the United States, in consideration for approximately \$16.5 million. As part of the divestiture of our interest in RIT Oncology, on March 6, 2009, we announced an immediate reduction in force of 20 employees directly and indirectly involved in the sales and marketing, and medical affairs and other operations related to Zevalin and the reduction in force of an additional 14 employees following the termination of transition services to RIT Oncology.

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

Table of Contents

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

Lack of Liquidity

As of December 31, 2008 we had cash and cash equivalents, securities available-for-sale and interest receivable of approximately \$10.7 million, and total current liabilities of \$42.3 million. Our current cash and cash equivalents, securities available-for-sale and interest receivable continue to be significantly less than our total current liabilities. We received \$7.5 million in gross proceeds in January 2009 in connection with the initial formation of RIT Oncology, and \$6.5 million in gross proceeds from Spectrum in March 2009 in connection with the sale of our 50% interest in RIT Oncology to Spectrum. In addition, in connection with such divestiture, we expect to receive from funds currently held in escrow approximately \$10 million in gross proceeds, of which \$6.5 million was released to us on April 3, 2009 and \$3.5 million, subject to certain adjustments for among other things payables determined to be owed between us and RIT Oncology, is expected to be released to us on April 15, 2009. Our existing cash and cash equivalents, securities available-for-sale and interest receivable including proceeds from offerings to date as well as the additional funds of approximately \$10.0 million to be received in connection with the divestiture of our interest in RIT Oncology are not sufficient to fund our presently anticipated operations beyond May 2009. See Risk Factors.

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

Recent Financings

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

In December 2008, we sold \$32.7 million in principal amount of our 10% Convertible Senior Notes due 2011 (the 10% Convertible Notes) to the same institutional investor as in our October 2008 convertible note offering. In connection with the offering, we also repurchased, for approximately \$29.0 million, approximately \$30.0 million principal amount of our 15% Convertible Senior Notes due 2011 issued in June 2008 to the investor, our Series B 18.33% convertible Senior Notes due 2011 issued in August 2008 to the investor and our 9.66% Convertible Senior Notes due 2011 issued in October 2009 to the investor and warrants to purchase approximately 5.15 million shares of common stock issued in 2007 and 2008 to the investor. We used approximately \$16.4 million of the \$32.7 million in cash that we received from the offering of our 10% Convertible Senior Notes to repurchase these three series of convertible senior notes and warrants and we paid the remaining approximately \$12.6 million of the repurchase price from funds released to us from the escrow account established to pay the make-whole and interest payments on the three series of convertible senior notes repurchased.

Table of Contents

Exchange Listing Matters

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

On March 6, 2009, we were notified by NASDAQ that the NASDAQ Listing Qualifications Panel had determined to continue the listing of our common stock on The NASDAQ Capital Market, subject to the condition that, on or before April 6, 2009, we demonstrate compliance with all applicable standards for continued listing on The NASDAQ Capital Market, including the \$35 million market value of listed securities requirement or one of its alternatives. In addition, the Panel issued a public reprimand for our prior failures to comply with the shareholder approval requirements and late filing of Listing of Additional Shares forms. On April 2, 2009, we were notified by NASDAQ that we had complied with the Panel's decision dated March 6, 2009 and, accordingly, the Panel had determined to continue the listing of our common stock on The Nasdaq Stock Market.

Our stock is also traded on the MTA stock market in Milan, Italy. The Borsa Italiana and Commissione Nazionale per le Società e la Borsa, or CONSOB, have made several requests for information asking us to provide additional clarifications about our business operations and financial condition, and we have complied with such requests and have met with CONSOB on several occasions to answer questions. On February 10, 2009, we were notified that the Borsa Italiana had indefinitely halted trading of our common stock on the MTA stock market in Milan, Italy. As result of such action, NASDAQ also halted trading of our common stock on the same day. Following the issuance of a press release in Italy in response to information requested by CONSOB regarding our business operations and financial condition, which was also furnished as a Current Report on Form 8-K filed on February 17, 2009, the Borsa Italiana re-initiated trading in our shares with the open of trading in Italy on February 18, 2009. NASDAQ re-initiated trading in our shares prior to the open of the regular trading session on NASDAQ on February 18, 2009. On March 23, 2009, the Borsa Italiana halted trading of our common stock on the MTA stock market and resumed trading prior to opening of the MTA the next day after we filed a press release regarding the explanatory paragraph in our auditor's reports on our December 31, 2008 and 2007 consolidated financial statements regarding their substantial doubt as to our ability to continue as a going concern. As a consequence, NASDAQ also halted trading in our common stock on March 23, 2009 but re-initiated trading later that day.

Other Information

We make available on our website important information such as press releases, presentations from investor and medical conferences, as well as other information about our company. The address for our website is <http://www.celltherapeutics.com> and the address for the investor relations page of our website is <http://www.celltherapeutics.com/investors>. The contents of our website are not part of this prospectus, and the reference to our website does not constitute incorporation by reference into this prospectus of the information contained at that site.

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 \$150,000,000 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

Table of Contents

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. In early February 2009, we issued 6,702 shares of new Series F preferred stock in exchange for certain shares of our Series A 3% convertible preferred stock, our Series B 3% convertible preferred stock and our Series C 3% convertible preferred stock. All of our Series B 3% convertible preferred stock and our Series C 3% convertible preferred stock was exchanged for our Series F preferred stock. On April 1 and 2, 2009, all of our Series F preferred stock was converted into common stock at the option of holders of such preferred stock at a conversion price of \$0.14 per share. As of April 5, 2009, 100 shares of our Series A 3% convertible preferred stock and 1,000 shares of our Series D 7% convertible preferred stock were outstanding. All of our Series E 13.5% preferred stock was exchanged for convertible debt in June 2008 at the election of the holder of such preferred stock pursuant to our amended and restated articles of incorporation.

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 or officers' certificates 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

Table of Contents

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

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

	Year Ended December 31,				
	2004	2005	2006	2007	2008
Ratio of earnings to fixed charges					
Ratio of earnings to combined fixed charges and preferred stock dividends(1)					

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

Table of Contents

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

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

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

any projections of revenues, operating expenses 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 or timelines;

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 those 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.

Table of Contents**RISK FACTORS**

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

Factors Affecting Our Operating Results and Financial Condition

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

We have substantial operating expenses associated with the development of our product candidates and as of December 31, 2008 we had cash and cash equivalents, securities available-for-sale and interest receivable of approximately \$10.7 million, which does not take into account \$7.5 million in gross proceeds received from Spectrum in January 2009 in connection with the initial formation of RIT Oncology, or \$6.5 million in gross proceeds received from Spectrum in March 2009 in connection with the sale of our 50% interest in RIT Oncology to Spectrum. In addition, we expect to receive approximately an additional \$10 million in connection with such divestiture, which amount is currently held in escrow by an independent third party escrow agent. Under the terms of the escrow agreement, \$6.5 million was released from escrow to us on April 3, 2009, and the remaining balance of \$3.5 million, less certain adjustments to be agreed upon between us and Spectrum, is expected to be received on April 15, 2009. As to such \$3.5 million, there is no certainty that we will receive all or substantially all of such amount after such adjustments are agreed to and accounted for in calculating the amount to be released to us from escrow. As of December 31, 2008, our total current liabilities were approximately \$42.3 million and we also had a substantial amount of debt outstanding. The aggregate principal balance of our debt as of December 31, 2008 was approximately \$142.2 million in convertible notes with interest rates ranging from 4% to 10% which does not take into account \$18.0 million in conversions of our 10% notes due 2011. We expect that our existing cash and cash equivalents, securities available-for-sale, interest receivable, proceeds received from our offerings to date as well as the additional funds of approximately \$10.0 million to be received from Spectrum, subject to adjustment as noted above, will not provide sufficient working capital to fund our presently anticipated operations beyond May 2009 and we therefore need to raise additional capital.

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

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

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

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

Table of Contents

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

We were incorporated in 1991 and have incurred a net operating loss every year. As of December 31, 2008, we had an accumulated deficit of approximately \$1.3 billion. We are pursuing regulatory approval for pixantrone, OPAXIO and brostallicin. We will need to conduct research, development, testing and regulatory compliance activities and undertake manufacturing and drug supply activities, expenses which, together with projected general and administrative expenses, will result in operating losses for the foreseeable future. We may never become profitable, even if we are able to commercialize products currently in development or otherwise.

Our debt and operating expenses exceed our net revenues.

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

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

Effective with the opening of trading on January 8, 2009, the U.S. listing of our common stock was transferred to The NASDAQ Capital Market, subject to meeting a minimum market value of listed securities of \$35 million. The NASDAQ Listing Qualifications Panel (the Panel) approved this transfer after our market capitalization did not comply with the minimum market capitalization required for companies listed on The NASDAQ Global Market, and we presented a plan to the Panel for regaining compliance with the NASDAQ Marketplace Rules. On January 23, 2009, we received an Additional Staff Determination Letter (the Determination Letter) from The NASDAQ Stock Market (NASDAQ) that stated the NASDAQ staff had concluded that we had violated Marketplace Rule 4350(i)(1)(C), which requires shareholder approval in connection with an acquisition if the issuance or potential issuance is greater than 20% of the pre-acquisition shares outstanding, and that we had at times not complied with Marketplace Rule 4310(c)(17) regarding submission of a Listing of Additional Shares form. On February 18, 2009, we updated the Panel on our plan for regaining compliance and requested an extension of the deadline to regain compliance with the minimum market capitalization requirement for The NASDAQ Capital Market. On March 6, 2009, we were notified by NASDAQ that the Panel had determined to continue the listing of our common stock on The NASDAQ Capital Market, subject to the condition that, on or before April 6, 2009, we demonstrate compliance with all applicable standards for continued listing on The NASDAQ Capital Market, including the \$35 million minimum market capitalization requirement. In addition, the Panel issued a public reprimand for our prior failures to comply with the shareholder approval requirements and late filing of Listing of Additional Shares forms. On April 2, 2009, we were notified by NASDAQ that we had complied with the Panel's decision dated March 6, 2009, and, accordingly, the Panel had determined to continue the listing of our common stock on The NASDAQ Stock Market.

In addition, our stock price is currently below \$1.00. Although NASDAQ has suspended the \$1.00 minimum bid price requirement through July 19, 2009, there can be no assurances that our stock price will be above \$1.00 when the minimum bid price requirement is reinstated, nor can there be any assurance that NASDAQ will further extend the suspension of such requirement. At our Special Meeting of Shareholders held on March 24, 2009, the proposal to allow the Board, in its discretion, to effect a reverse stock split of our Common Stock was not approved by the shareholders. In the event that our stock price is below \$1.00 when the minimum bid price requirement is reinstated, we may not be able to effect a reverse stock split to increase our stock price if we are unable to obtain shareholder approval of a reverse stock split in the future.

In the event our common stock is delisted from the NASDAQ markets, we currently expect that our common stock would be eligible to be listed on the OTC Bulletin Board or Pink Sheets. We do not know what impact delisting from the NASDAQ markets may have on our listing with Borsa Italiana.

Although we continue to be listed on The NASDAQ Capital Market, trading in our common stock may be halted or suspended due to market conditions or if NASDAQ, CONSOB or the Borsa Italiana determines that trading in our common stock is inadvisable. Trading in our common stock was halted by the Borsa Italiana on February 10, 2009, and, as a consequence, trading in our common stock was halted by NASDAQ. After we provided

Table of Contents

CONSOB with additional information and clarification on our business operations and financial condition as requested and published a press release containing such information in Italy, CONSOB and NASDAQ lifted the trading halt on our stock. In addition, on March 23, 2009, the Borsa Italiana halted trading of our common stock on the MTA stock market and resumed trading prior to opening of the MTA the next day after we filed a press release regarding the explanatory paragraph in our auditor's reports on our December 31, 2008 and 2007 consolidated financial statements regarding their substantial doubt as to our ability to continue as a going concern. As a consequence, NASDAQ also halted trading in our common stock on March 23, 2009 but re-initiated trading later that day. CONSOB may make additional inquiries about our business and financial conditions at any time, and there can be no guarantee that CONSOB or NASDAQ will not halt trading in our shares again in the future.

If our common stock ceases to be listed for trading on The NASDAQ Stock Market, the MTA, or both for any reason or if trading in our stock is halted or suspended on The NASDAQ Stock Market, the MTA, or both, it may harm our stock price, increase the volatility of our stock price and make it more difficult for investors to buy or sell shares of our common stock. Moreover, if our common stock ceases to be listed for trading on The NASDAQ Stock Market or if trading in our stock is halted or suspended on The NASDAQ Stock Market, we may become subject to obligations to redeem certain shares of preferred stock at a premium and/or repay on an accelerated basis certain convertible notes. In addition, if we are not listed on The NASDAQ Stock Market and/or if our public float falls below \$75 million, we will be limited in our ability to file new shelf registration statements on SEC Form S-3 and/or to fully use one or more registration statements on SEC Form S-3. We have relied significantly on shelf registration statements on SEC Form S-3 for most of our financings in recent years, so any such limitations may have a material adverse effect on our ability to raise the capital we need.

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

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

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

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

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

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

Table of Contents

In addition, under Italian law, we must publish a listing prospectus that has been approved by CONSOB prior to issuing common stock in any twelve-month period that exceeds 10% of the number of shares of common stock outstanding at the beginning of that period. We have attempted to publish a listing prospectus in Italy to cover our general offerings for the past two years, beginning in April 2007. After working with CONSOB to meet their requirements to publish that listing prospectus for the remainder of 2007, we were finally able to publish a listing prospectus in January 2008, however, that listing prospectus was limited to shares to be issued to Société Générale under the Step-Up Equity Financing Agreement we entered into with Société Générale in 2006, which has since terminated. After meeting with CONSOB in 2008 to further discuss their requirements for a more general listing prospectus, we filed a new listing prospectus on December 31, 2008 which has not yet been published. We are continuing to work with CONSOB to meet their requirements to publish this new listing prospectus. As a result, we are required to raise money using alternative forms of securities; for example, we use convertible preferred stock and convertible debt in lieu of common stock as convertible preferred stock and convertible debt are not subject to the 10% limitation imposed by Italian law.

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

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

Italian employment law, including collective bargaining agreements negotiated at the national level and over which we have no control and which may complicate our efforts to divest or cease our Italian operations;

European data protection regulations, under which we will be unable to send private personal data, including many employment records and some clinical trial data, from our Italian offices to our U.S. offices until our U.S. offices self-certify their adherence to the safe harbor framework established by the U. S. Department of Commerce in consultation with the European Commission;

tariffs, customs, duties and other trade barriers; and

capital controls, terrorism and other political risks.

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

effectively pursuing the clinical development and regulatory approvals of all product candidates;

successfully commercializing products under development;

coordinating research and development activities to enhance introduction of new products and technologies;

coalescing the Italian business culture with our own and maintaining employee morale; and

maintaining appropriate uniform standards, controls, procedures and policies relating to financial reporting and employment-related matters, and the conduct of development activities that comply with both U.S. and Italian laws and regulations.

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.

-15-

Table of Contents

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

As long as we continue to have operations in Italy, we are exposed to risks associated with foreign currency transactions insofar as we use U.S. dollars to make contract payments denominated in euros or vice versa. As the net positions of our foreign currency transactions might fluctuate, our earnings might be negatively affected. In addition, we are exposed to risks associated with the translation of euro-denominated financial results and accounts into U.S. dollars. Our reporting currency will remain as the U.S. dollar; however, so long as we continue to have operations in Italy, a portion of our consolidated financial obligations will arise in euros. In addition, as long as we continue to have operations in Italy, the carrying value of some of our assets and liabilities will be affected by fluctuations in the value of the U.S. dollar as compared to the euro. Changes in the value of the U.S. dollar as compared to the euro might have an adverse effect on our reported results of operations and financial condition.

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

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

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

Our financial condition may be adversely affected if Spectrum Pharmaceuticals, Inc. defaults in the performance of contractual obligations.

Because we do not currently have any marketed products producing revenue, our business is dependent on the performance by third parties, including Spectrum, of their responsibilities under contractual relationships, including the timely and mutual determination of the adjustment to \$3.5 million currently held in escrow and the timely release of such remaining purchase price for the sale of our remaining 50% interest in RIT Oncology. If Spectrum were to default on the performance of its obligations in connection with the sale, we could suffer significant financial losses and operational problems, which could in turn adversely affect our financial performance, cash flows or results of operations and may jeopardize our ability to maintain our operations. Additionally, if RIT Oncology fails to perform its obligations owed to Biogen under certain Zevalin related contracts, including the payment of any milestones, Biogen may look to us in connection with those obligations under the guarantee in favor of Biogen, except that Spectrum is required to reimburse us for 100% of any payment of such obligations by us to Biogen, and we are dependent on Spectrum to fulfill such reimbursement obligation.

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

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

Table of Contents

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

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

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

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

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

We are subject to extensive government regulation.

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

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

Table of Contents

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

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

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

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

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

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

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

Table of Contents

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

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

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

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

challenging the prices charged for health care products and services,

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

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

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

denying coverage altogether.

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

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

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

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

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,

-19-

Table of Contents

fail to receive necessary regulatory approvals,

be difficult to manufacture on a scale necessary for commercialization,

be uneconomical to produce,

fail to achieve market acceptance, or

be precluded from commercialization by proprietary rights of third parties.

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

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

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

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

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

obtain patent protection for our products or processes both in the United States and other countries,

protect trade secrets, and

prevent others from infringing on our proprietary rights.

When polymers are linked, or conjugated, to drugs, the results are referred to as polymer-drug conjugates. We are developing drug delivery technology that links chemotherapy to biodegradable polymers. For example, OPAXIO is paclitaxel, the active ingredient in Taxol[®], one of the world's best selling cancer drugs, linked to polyglutamate. We may not receive a patent for all of our polymer-drug conjugates and we may be challenged by the holder of a patent covering the underlying drug and/or methods for its use or manufacture.

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

Table of Contents

Costly litigation might be necessary to protect a patent position or to determine the scope and validity of third-party proprietary rights, and we may not have the required resources to pursue any such litigation or to protect our patent rights. Any adverse outcome in litigation with respect to the infringement or validity of any patents owned by third parties could subject us to significant liabilities to third parties, require disputed rights to be licensed from third parties or require us to cease using a product or technology.

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

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

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

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

Our articles require that a quorum, consisting of one-third of the outstanding shares of voting stock, be represented in person or by proxy in order to transact business at a meeting of our shareholders. In addition, amendments to our articles, such as an amendment to increase our authorized capital stock, require the approval of a majority of our outstanding shares. A substantial majority of our common shares are held by Italian institutions and, under Italian laws and regulations, it is difficult to communicate with the beneficial holders of those shares to obtain votes. In 2006, when a quorum required a majority of the outstanding shares of our voting stock be represented in person or by proxy, we scheduled two annual meetings of shareholders but were unable to obtain quorum at either meeting. Following that failure to obtain quorum, we contacted certain depository banks in Italy where significant numbers of shares of our common stock were held and asked them to cooperate by making a book entry transfer of their share positions at Monte Titoli to their U.S. correspondent bank, who would then transfer the shares to an account of the Italian bank at a U.S. broker-dealer that is an affiliate of that bank. Certain of the banks contacted agreed to make the share transfer pursuant to these arrangements as of the record date of the meeting, subject to the relevant beneficial owner taking no action to direct the voting of such shares. Under Rule 452 of the New York Stock Exchange, the U.S. broker-dealer may vote shares absent direction from the beneficial owner on certain matters, such as the uncontested election of directors, an amendment to our articles of incorporation to increase authorized shares that are to be used for general corporate purposes, and the ratification of our auditors. As a result of this custody transfer, we were able to hold special meetings of the shareholders in April 2007, January 2008 and March 2009 and annual meetings of the shareholders in September 2007 and June 2008. At the meeting in June 2008, our shareholders approved a proposal to reduce our quorum requirement from a majority of outstanding voting shares to one-third of outstanding voting shares. However, obtaining a quorum at future meetings even at the lower threshold and obtaining necessary shareholder approvals will depend in part upon the willingness of the Italian depository banks to continue participating in the custody transfer arrangements, and we cannot be assured that those banks that have participated in the past will continue to participate in custody transfer arrangements in the future. We are continuing to explore other alternatives to achieve quorum for and shareholder representation at our meetings; however, we cannot be certain that we will find an alternate method if we are unable to continue to use the custody transfer arrangements. As a result, we may be unable to obtain quorum at future annual or special meetings of shareholders or obtain shareholder approval of proposals when needed.

Table of Contents

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

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

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

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

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

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

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

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

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

We divested our commercial product, TRISENOX, in July 2005 and fully divested our commercial product, Zevalin, in March 2009. Currently, we do not have a marketed product, and unless we are able to develop one of our product candidates such as pixantrone into an approved commercial product, we will not generate any

Table of Contents

significant revenues from product sales, royalty payments, license fees or otherwise. Pixantrone, OPAXIO and brostallicin are currently in clinical trials; these clinical trials may not be successful and, even if they are, we may not be successful in developing any of them into a commercial product. For example, our STELLAR phase III clinical trials for OPAXIO for the treatment of non-small cell lung cancer failed to meet their primary endpoints. In addition, a number of companies in the pharmaceutical industry, including us, have suffered significant setbacks in advanced clinical trials, even after reporting promising results in earlier trials. We will need to commit significant time and resources to develop these and any additional product candidates. Our product candidates will be successful only if:

our product candidates are developed to a stage that will enable us to commercialize them or sell related marketing rights to pharmaceutical companies;

we are able to commercialize product candidates in clinical development or sell the marketing rights to third parties; and

our product candidates, if developed, are approved by the regulatory authorities.

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

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

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

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

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

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

we may not obtain authorization to permit product candidates that are already in the preclinical development phase to enter the human clinical testing phase;

authorized preclinical or clinical testing may require significant time, resources or expertise to those originally expected to be necessary;

clinical testing may not show potential products to be safe and efficacious and, as with many drugs, may fail to demonstrate the desired safety and efficacy characteristics in human clinical trials;

clinical testing may show that potential products are not appropriate for the specific indication for which they are being tested;

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

the results from preclinical studies and early clinical trials may not be indicative of the results that will be obtained in later-stage clinical trials;

we or regulatory authorities may suspend clinical trials at any time on the basis that the participants are being exposed to unacceptable health risks or for other reasons; and

-23-

Table of Contents

completion of clinical trials depends on, among other things, the number of patients available for enrollment in a particular trial, which is a function of many factors, including the number of patients with the relevant conditions, the nature of the clinical testing, the proximity of patients to clinical testing centers, the eligibility criteria for tests as well as competition with other clinical testing programs involving the same patient profile but different treatments.

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

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

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

We have entered into collaborative arrangements with third-parties to develop and/or commercialize product candidates and are currently seeking additional collaborations. For example, we entered into an agreement with the Gynecologic Oncology Group to perform a phase III trial of OPAXIO in patients with ovarian cancer. Additional collaborations might be necessary in order for us to fund our research and development activities and third-party manufacturing arrangements, seek and obtain regulatory approvals and successfully commercialize our existing and future product candidates. If we fail to enter into additional collaborative arrangements or fail to maintain our existing collaborative arrangements, the number of product candidates from which we could receive future revenues would decline. For example, in 2005 we sold our product TRISENOX to Cephalon and, pursuant to the terms of the purchase agreement under which TRISENOX was sold, we are entitled to receive milestone payments upon the approval by the FDA of new labeled uses for TRISENOX; however, Cephalon may decide not to submit any additional information to the FDA to apply for label expansion of TRISENOX, in which case we would not receive a milestone payment under the agreement.

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

collaborative arrangements may not be on terms favorable to us;

disagreements with partners may result in delays in the development and marketing of products, termination of our collaboration agreements or time consuming and expensive legal action;

we cannot control the amount and timing of resources partners devote to product candidates or their prioritization of product candidates and partners may not allocate sufficient funds or resources to the development, promotion or marketing of our products, or may not perform their obligations as expected;

partners may choose to develop, independently or with other companies, alternative products or treatments, including products or treatments which compete with ours;

agreements with partners may expire or be terminated without renewal, or partners may breach collaboration agreements with us;

business combinations or significant changes in a partner's business strategy might adversely affect that partner's willingness or ability to complete its obligations to us; and

the terms and conditions of the relevant agreements may no longer be suitable.

Table of Contents

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

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

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

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

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

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

Our research and development activities involve the controlled use of hazardous materials, chemicals and various radioactive compounds. We are subject to international, federal, state and local laws and regulations governing the use, manufacture, storage, handling and disposal of such materials and certain waste products. Although we believe that our safety procedures for handling and disposing of such materials comply with the standards prescribed by the regulations, the risk of accidental contamination or injury from these materials cannot be eliminated completely. In the event of such an accident, we could be held liable for any damages that result and any such liability not covered by insurance could exceed our resources. Compliance with environmental laws and regulations may be expensive, and current or future environmental regulations may impair our research, development or production efforts.

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

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

Risks Related To the Securities Markets

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

The market price for securities of biopharmaceutical and biotechnology companies, including ours, historically has been highly volatile, and the market from time to time has experienced significant price and volume fluctuations that are unrelated to the operating performance of such companies. For example, during the twelve month period ended April 3, 2009, our stock price has ranged from a low of \$0.05 to a high of \$9.10. Fluctuations in the trading price or liquidity of our common stock may adversely affect the value of your investment in our common stock.

Table of Contents

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

announcements by us or others of results of preclinical testing and clinical trials and regulatory actions;

announcements of technological innovations or new commercial therapeutic products by us, our collaborative partners or our present or potential competitors;

our issuance of additional debt, equity or other securities, which we need to pursue in 2009 to generate additional funds to cover our current debt and operating expenses;

our quarterly operating results;

developments or disputes concerning patent or other proprietary rights;

developments in our relationships with collaborative partners;

acquisitions or divestitures;

litigation and government proceedings;

adverse legislation, including changes in governmental regulation;

third-party reimbursement policies;

changes in securities analysts' recommendations;

short selling;

changes in health care policies and practices;

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

economic and other external factors; and

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

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 us and certain of our directors and officers and a derivative action lawsuit was filed against our full board of directors. While these lawsuits were dismissed with prejudice, as a result of these types of lawsuits, we could incur substantial legal fees and our management's attention and resources could be diverted from operating our business as we respond to the litigation. We maintain significant insurance to cover these risks for the Company and our directors and officers, but our insurance is subject to high deductibles to reduce premium expense, and there is no guarantee that the insurance will cover any specific claim that we may face in the future, or that it will be adequate to cover all potential liabilities and damages.

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

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

a classified board so that only approximately one third of the board of directors is elected each year;

elimination of cumulative voting in the election of directors;

procedures for advance notification of shareholder nominations and proposals;

Table of Contents

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.

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 working capital and for 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 and general working capital. 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 described above, we may temporarily invest the net proceeds in short- and medium-term interest-bearing obligations, investment-grade instruments certificates of deposit or direct or guaranteed obligations of the U.S. government.

DIVIDEND POLICY

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

Table of Contents

DESCRIPTION OF CAPITAL STOCK

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

General

We are authorized to issue 800,000,000 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 April 3, 2009 there were 379,440,863 shares of our common stock outstanding and warrants to purchase 1,543,433 shares of our common stock were outstanding. As of the close of business on April 3, 2009, we also had 100 shares of our Series A 3% convertible preferred stock outstanding and 1,000 shares of our Series D 7% convertible preferred stock outstanding.

Common Stock

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

General Description of Preferred Stock

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

restricting dividends on the common stock;

diluting the voting power of the common stock;

impairing the liquidation rights of the common stock;

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

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

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

Table of Contents

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

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

Transfer Agent and Registrar

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

DESCRIPTION OF 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.

Table of Contents

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;

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;

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

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;

-30-

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.

Table of Contents

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:

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, or to make payment required by any sinking fund or analogous fund 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

Table of Contents

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. 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 modify an indenture without the consent of any holders with respect to specific matters, including:

to fix any ambiguity, defect or inconsistency in the indenture or in the debt securities of any series;

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

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 under the indenture 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

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

to change anything that does not adversely affect the rights of any holder of debt securities of any series in any material respect. 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;

-33-

Table of Contents

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 certain obligations, including 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;

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, or a combination of both, 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 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.

Table of Contents

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.

Table of Contents

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;

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.

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

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

-37-

Table of Contents

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

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;

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.

Table of Contents

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.

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.

Table of Contents

For securities held in street name, we or any applicable trustee or depository 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 depository 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

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;

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 depository'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 depository. 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 depository. Unless we specify otherwise in the applicable prospectus supplement, The Depository Trust Company, New York, New York, known as DTC, will be the depository for all global securities issued under this prospectus.

Table of Contents

A global security may not be transferred to or registered in the name of anyone other than the depository, its nominee or a successor depository, 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 depository, 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 depository 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 depository, 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 depository 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 depository'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 depository's actions or for its records of ownership interests in the global security. We and the trustee also do not supervise the depository in any way;

The depository 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 depository'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 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

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

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.

-41-

Table of Contents

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 after we receive notice or become aware of such condition;

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 and we have received a request from the depositary for the discontinuance of securities in global form.

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 prices, 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.

Table of Contents

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 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 overallotment transactions, stabilizing transactions, short-covering transactions and penalty bids in accordance with Regulation M under the Exchange Act. Overallotment 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 Capital Market may engage in passive market making transactions in the common stock on the NASDAQ Capital 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

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

EXPERTS

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

WHERE YOU CAN FIND MORE INFORMATION

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

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

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

our Annual Report on Form 10-K for the fiscal year ended December 31, 2008;

our definitive Proxy Statement on Schedule 14A, dated and filed with the SEC on January 14, 2009 for a Special Meeting of Shareholders, as amended by Amendment No. 1 to the definitive Proxy Statement on Schedule 14A, dated as of February 4, 2009 and filed with the SEC on February 5, 2009 and Definitive Additional Materials filed with the SEC on January 26, 2009, February 27, 2009 and March 9, 2009;

our Current Reports on Form 8-K filed on January 6, 2009, January 8, 2009, January 29, 2009, February 9, 2009, February 23, 2009, March 6, 2009, March 16, 2009 (Items 1.01 and 2.01 only) and March 27, 2009; and

the description of our capital stock contained in our Registration Statements on Form 10 filed with the SEC on June 27, 1996, including any amendment or reports filed for the purpose of updating that description.

Table of Contents

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

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

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

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

Louis A. Bianco

Executive Vice President, Finance and Administration

Cell Therapeutics, Inc.

501 Elliott Avenue West, Suite 400

Seattle, Washington 98119

(206) 282-7100