

CELL THERAPEUTICS INC
Form 424B5
February 18, 2011
Table of Contents

PROSPECTUS SUPPLEMENT

Filed Pursuant to Rule 424(b)(5)

(to Prospectus dated February 15, 2011)

Registration Statement No: 333-161442

CELL THERAPEUTICS, INC.

24,957 Shares of Series 10 Non-Convertible Preferred Stock

Warrants to Purchase 25,919,733 Shares of Common Stock

Additional Investment Right to Purchase 24,957 Shares of Series 11 Convertible Preferred Stock

24,957 Shares of Series 11 Convertible Preferred Stock

74,056,380 Shares of Common Stock

Pursuant to this prospectus supplement and the accompanying prospectus, we are offering to an institutional accredited investor, or the Initial Purchaser:

up to 24,957 shares of Series 10 Non-Convertible Preferred Stock, or the Series 10 Preferred Stock;

warrants to purchase up to 25,919,733 shares of common stock, or the warrants (and the 25,919,733 shares of common stock issuable from time to time upon exercise of the warrants); and

the additional investment right to purchase up to 24,957 shares of Series 11 Convertible Preferred Stock, or the additional investment right (and the 24,957 shares of Series 11 Convertible Preferred Stock, or the Series 11 Preferred Stock, issuable from time to time upon exercise of the additional investment right and the 74,056,380 shares of common stock issuable from time to time upon conversion of the Series 11 Preferred Stock).

The purchase price for each share of Series 10 Preferred Stock is \$1,000. The shares of Series 10 Preferred Stock will accrue annual dividends at the rate of 10% from the date of issuance, payable in the form of additional shares of Series 10 Preferred Stock. The shares of Series 10 Preferred Stock are redeemable at our option at any time after issuance, in whole or in part, either in cash or by offset against recourse notes fully secured with marketable securities, which are issued by the Initial Purchaser to us, or recourse notes.

In consideration for the purchase of the Series 10 Preferred Stock, the Initial Purchaser will receive the warrants. Each warrant to purchase shares of our common stock will have an exercise price of \$0.337 per share of common stock. The warrants are exercisable immediately and expire two years from the date of issuance. The exercise price of the warrants may be paid in cash or through the issuance by the Initial Purchaser to us of recourse notes. The warrants are subject to cancellation and mandatory exercise, in each case in whole or in part, as described in this prospectus supplement.

In consideration for the purchase of the Series 10 Preferred Stock, the Initial Purchaser will also receive the additional investment right. The exercise price of the additional investment right is \$1,000 per share of Series 11 Preferred Stock. The additional investment right is exercisable immediately and must be exercised within 30 days of the date of this prospectus supplement. The exercise price of the additional investment right may be paid in cash or through the issuance by the Initial Purchaser to us of recourse notes. The additional investment right is subject to cancellation, in whole or in part, as described below.

The closing of the issuance and sale of the Series 10 Preferred Stock, or the closing, is expected to occur on the 10th trading day following the date of this prospectus supplement, or the closing date, and is conditioned upon the closing bid price of our common stock remaining at or above \$0.2528 for each of the nine trading days following the date of this prospectus supplement. In the event that the closing bid price of our common

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

stock falls below \$0.2528 prior to the closing date, the closing may be cancelled or, in the event that all or any portion of the warrants and/or the additional investment right have been exercised, we may elect to proceed with a partial closing as described in this prospectus supplement.

Table of Contents

We are conducting this offering on a self-underwritten, best efforts basis and there will be no underwriter or placement agent involved in the sale of these securities. Accordingly, we will retain, subject to the offering expenses that we incur and the payment to the Initial Purchaser of a commitment fee, all of the proceeds from the sale of the shares of Series 10 Preferred Stock, if any, and the proceeds received upon exercise of the warrants and the additional investment right for cash, if any.

For a more detailed description of the Series 10 Preferred Stock, the warrants, the additional investment right and the Series 11 Preferred Stock, see the sections entitled Description of Series 10 Preferred Stock, Description of Warrants, Description of Additional Investment Right and Description of Series 11 Preferred Stock beginning on pages S-17, S-18, S-19 and S-20, respectively, of this prospectus supplement. For a more detailed description of our common stock issuable upon the conversion of the Series 11 Preferred Stock and exercise of the warrants, see the section entitled Description of Capital Stock beginning on page S-23 of this prospectus supplement.

The Series 10 Preferred Stock, the warrants, the additional investment right and the Series 11 Preferred Stock will not be listed on any national securities exchange. Our common stock is quoted on The NASDAQ Capital Market and on the Mercato Telematico Azionario stock market in Italy, or the MTA, under the symbol CTIC. On February 17, 2011, the last reported sale price of our common stock on The NASDAQ Capital Market was \$0.3379.

Investing in the Series 10 Preferred Stock, the warrants, the additional investment right, the Series 11 Preferred Stock and the common stock involves a high degree of risk. See the section entitled Risk Factors beginning on page S-7 of this prospectus supplement and in the documents we incorporate by reference in this prospectus supplement to read about factors you should consider before investing in our securities.

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

This prospectus supplement is dated February 17, 2011.

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>INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE</u>	S-ii
<u>SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS</u>	S-iii
<u>SUMMARY</u>	S-1
<u>THE OFFERING</u>	S-2
<u>RISK FACTORS</u>	S-7
<u>USE OF PROCEEDS</u>	S-13
<u>DETERMINATION OF OFFERING PRICE</u>	S-14
<u>RATIO OF EARNINGS TO COMBINED FIXED CHARGES AND PREFERRED STOCK DIVIDENDS</u>	S-15
<u>DIVIDEND POLICY</u>	S-16
<u>DESCRIPTION OF SERIES 10 PREFERRED STOCK</u>	S-17
<u>DESCRIPTION OF WARRANTS</u>	S-18
<u>DESCRIPTION OF ADDITIONAL INVESTMENT RIGHT</u>	S-19
<u>DESCRIPTION OF SERIES 11 PREFERRED STOCK</u>	S-20
<u>DESCRIPTION OF CAPITAL STOCK</u>	S-23
<u>CERTAIN U.S. FEDERAL INCOME TAX CONSIDERATIONS</u>	S-25
<u>PLAN OF DISTRIBUTION</u>	S-29
<u>LEGAL MATTERS</u>	S-30

Prospectus

	Page
<u>ABOUT THIS PROSPECTUS</u>	1
<u>WHERE YOU CAN FIND MORE INFORMATION</u>	1
<u>INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE</u>	2
<u>SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS</u>	3
<u>SUMMARY</u>	4
<u>RISK FACTORS</u>	13
<u>RATIO OF EARNINGS TO FIXED CHARGES AND OF EARNINGS TO COMBINED FIXED CHARGES AND PREFERRED STOCK DIVIDENDS</u>	19
<u>USE OF PROCEEDS</u>	19
<u>DIVIDEND POLICY</u>	19
<u>DESCRIPTION OF CAPITAL STOCK</u>	20
<u>DESCRIPTION OF DEBT SECURITIES</u>	23
<u>DESCRIPTION OF WARRANTS</u>	30
<u>DESCRIPTION OF RIGHTS</u>	34
<u>DESCRIPTION OF UNITS</u>	34
<u>LEGAL OWNERSHIP OF SECURITIES</u>	35
<u>PLAN OF DISTRIBUTION</u>	39
<u>LEGAL MATTERS</u>	43
<u>EXPERTS</u>	43

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 the Series 10 Preferred Stock, the warrants, the additional investment right and the Series 11 Preferred Stock (or the shares of common stock issuable from time to time upon exercise of the warrants and conversion of the Series 11 Preferred Stock) 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.

S-i

Table of Contents

ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of this offering of Series 10 Preferred Stock, warrants (and the shares of common stock issuable from time to time upon exercise of the warrants) and additional investment right (and the shares of Series 11 Preferred Stock issuable from time to time upon exercise of the additional investment right and the shares of common stock issuable from time to time upon conversion of the Series 11 Preferred Stock), 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, you should rely on the information in this prospectus supplement.

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 its respective date, regardless of the time of delivery of this prospectus supplement and the accompanying prospectus, or of any sale of the Series 10 Preferred Stock, warrants (and the shares of common stock issuable from time to time upon exercise of the warrants) and additional investment right (and the shares of Series 11 Preferred Stock issuable from time to time upon exercise of the additional investment right and the shares of common stock issuable from time to time upon conversion of the Series 11 Preferred Stock). 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 www.sec.gov. Copies of certain information filed by us with the SEC are also available on our website at 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.

This prospectus supplement and the accompanying prospectus are part of a registration statement that 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 being offered hereby. 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.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

SEC rules allow us to incorporate by reference in this prospectus supplement and the accompanying 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 into this prospectus supplement and the accompanying prospectus is considered to be part of this prospectus supplement and the accompanying prospectus. This prospectus supplement and the accompanying prospectus

Table of Contents

incorporate 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, 2010;

our Current Report on Form 8-K filed with the SEC on January 18, 2011 (excluding Item 7.01 and Exhibit 99.1), as amended by our Current Report on Form 8-K/A filed with the SEC on January 28, 2011; and

the description of our capital stock contained in our Registration Statement on Form 10 filed on June 27, 1996, as amended. Because we are incorporating by reference future filings with the SEC, this prospectus supplement and the accompanying prospectus are continually updated and those future filings may modify or supersede some of the information included or incorporated by reference in this prospectus supplement and the accompanying 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 supplement and the accompanying prospectus or in any document previously incorporated by reference have been modified or superseded.

We will provide without charge to each person, including any beneficial owners, to whom this prospectus supplement is delivered, upon his or her written or oral request, a copy of any or all documents referred to above which have been or may be incorporated by reference in this prospectus supplement and the accompanying prospectus but not delivered with this prospectus supplement, excluding exhibits to those documents unless they are specifically incorporated by reference into those documents. You may request a copy of these documents 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

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

any statements regarding the performance, or likely performance, or outcomes or economic benefit of any licensing or other agreement, including any agreement with Novartis International Pharmaceutical Ltd. or its affiliates, including whether or not such partner will elect to participate, terminate or otherwise make elections under any such agreement or whether any regulatory authorizations required to enable such agreement will be obtained;

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

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;

S-iii

Table of Contents

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

any statements regarding compliance with the listing standards of The NASDAQ Stock Market, or NASDAQ;

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 develop, acquire and commercialize novel treatments for cancer. Our goal is to build a leading biopharmaceutical company with a diversified portfolio of proprietary oncology drugs. Our research, development, acquisition and in-licensing activities concentrate on identifying and developing new, less toxic and more effective ways to treat cancer. Our operations are primarily conducted in the United States. We are currently focusing our efforts on Pixuvri (pixantrone dimaleate), OPAXIO (paclitaxel poliglumex), brostallicin and bisplatinates.

Corporate Information

We were incorporated in the State of Washington in 1991. Our shares of common stock trade on The NASDAQ Capital Market and the MTA in Italy 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 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.

S-1

Table of Contents

THE OFFERING

The following is a brief summary of some of the terms of this offering and is qualified in its entirety by reference to the more detailed information appearing elsewhere in this prospectus supplement and the accompanying prospectus.

Securities we are offering

Up to 24,957 shares of Series 10 Preferred Stock, warrants to purchase up to 25,919,733 shares of common stock (and the 25,919,733 shares of common stock issuable from time to time upon exercise of the warrants) and the additional investment right to purchase up to 24,957 shares of Series 11 Preferred Stock (and the 24,957 shares of Series 11 Preferred Stock issuable from time to time upon exercise of the additional investment right and the 74,056,380 shares of common stock issuable from time to time upon conversion of the Series 11 Preferred Stock). The purchase price for each share of Series 10 Preferred Stock is \$1,000. In consideration for the purchase of the Series 10 Preferred Stock, the Initial Purchaser will receive the warrants and the additional investment right.

Closing

The closing is expected to occur on the closing date and is conditioned upon the closing bid price of our common stock remaining at or above \$0.2528 during the nine trading days following the date of this prospectus supplement. We refer to any day prior to the closing date during which the closing bid price falls below \$0.2528 as the early termination date in this prospectus supplement.

In the event that no portion of the warrants and/or the additional investment right has been exercised prior to the early termination date, the closing will be cancelled and the warrants and the additional investment right will automatically terminate on the early termination date.

In the event that all or any portion of the warrants and/or the additional investment right have been exercised prior to the early termination date, we may elect to require the Initial Purchaser to purchase shares of Series 10 Preferred Stock at the closing in an amount equal to 24,957 multiplied by the larger of (i) the percentage of the warrants so exercised and (ii) the percentage of the additional investment right so exercised, or the adjustment factor. In that case, the number of shares of common stock that must be purchased by the Initial Purchaser upon exercise of the warrants and the number of shares of Series 11 Preferred Stock that must be purchased by the Initial Purchaser upon exercise of the additional investment right will also be adjusted by the adjustment factor, as the case may be, and the balance of the unexercised warrants in excess of the adjusted number of warrants and the balance of the additional investment right in excess of the adjusted number of shares of Series 11 Preferred Stock, as the case may be, will automatically terminate. Alternatively, we may elect to hold the consideration received upon exercise of the warrants and/or the additional investment right and otherwise cancel the closing. In that case, no shares of Series 10 Preferred Stock will be issued and the unexercised warrants and the additional investment right will automatically terminate on the early termination date.

If the closing is not cancelled and the Initial Purchaser purchases all of the shares of Series 10 Preferred Stock on the closing date, as further described herein, the Initial Purchaser will be required to (i) exercise the additional investment right in full and (ii) exercise the warrants in full, in each case, within 30 days of the date of this prospectus supplement.

Commitment Fee

In connection with this offering, we will pay to the Initial Purchaser a commitment fee equal to 5.0% of the aggregate cash proceeds received by us from the Initial Purchaser for the purchase and

S-2

Table of Contents

sale of the Series 10 Preferred Stock at the closing, or the commitment fee. The commitment fee will be paid in the form of a deduction from the aggregate cash proceeds payable to us.

Escrow

In connection with this offering, the Initial Purchaser will deposit up to \$12,478,500 of the purchase price for the shares of Series 10 Preferred Stock into an escrow account upon any exercise of the warrants and the additional investment right. The amount of the purchase price to be deposited by the Initial Purchaser into the escrow account will equal the adjustment factor multiplied by \$24,957,000. The funds in the escrow account will be released to us in connection with the closing or partial closing of this offering. In the event that the closing is cancelled, the funds in the escrow account will be released to the Initial Purchaser.

Description of the Series 10 Preferred Stock

Dividends

Commencing on the issuance date of each share of Series 10 Preferred Stock, holders of the Series 10 Preferred Stock are entitled to receive annual dividends on each outstanding share of Series 10 Preferred Stock, which dividends shall accrue in the form of additional shares of Series 10 Preferred Stock at a rate equal to 10.0% per annum from the issuance date of the Series 10 Preferred Stock. Accrued dividends shall be payable upon redemption of the Series 10 Preferred Stock. The Series 10 Preferred Stock is *pari passu* with our outstanding shares of Series 8 Preferred Stock and senior to the Series 11 Preferred Stock as to dividends.

Conversion

The Series 10 Preferred Stock is not convertible.

Redemption

The shares of Series 10 Preferred Stock are redeemable at our option at any time after issuance, in whole or in part, either in cash or by offset against recourse notes. In the event that we elect to redeem shares of Series 10 Preferred Stock by offset against recourse notes, each share of Series 10 Preferred Stock (plus accrued dividends thereon, if any) shall be fully offset by \$1,350 principal amount of recourse notes (plus accrued interest thereon, if any), regardless of the issuance date of the shares of Series 10 Preferred Stock and recourse notes. See Description of Series 10 Preferred Stock Redemption.

Liquidation preference

In the event of our voluntary or involuntary dissolution, liquidation or winding up, each holder of Series 10 Preferred Stock will be entitled to be paid a liquidation preference equal to the initial stated value of such holder's Series 10 Preferred Stock of \$1,000 per share, plus accrued and unpaid dividends and any other payments that may be due on such shares, before any distribution of assets may be made to holders of capital stock ranking junior to the Series 10 Preferred Stock. The Series 10 Preferred Stock is *pari passu* with our outstanding shares of Series 8 Preferred Stock and the Series 11 Preferred Stock as to liquidations.

Voting rights and negative covenants

The Series 10 Preferred Stock will have no voting rights, except as otherwise expressly provided in our amended and restated articles of incorporation or as otherwise required by law. However, so long as at least 7,986 or more originally issued shares of Series 10 Preferred Stock are outstanding, we cannot amend our amended and restated articles of incorporation, amended and restated bylaws or other charter documents so as to materially, specifically and adversely affect the rights of the Series 10 Preferred Stock or

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

authorize or create any class of senior preferred stock, in each case, without the affirmative written consent of holders of a majority of the outstanding shares of Series 10 Preferred Stock.

S-3

Table of Contents

Description of warrants	<p>In consideration for the purchase of Series 10 Preferred Stock, the Initial Purchaser will receive warrants to purchase up to 25,919,733 shares of common stock. Each warrant to purchase shares of our common stock will have an exercise price of \$0.337 per share. The exercise price (and, in certain circumstances, the number of shares of common stock issuable upon exercise of the warrants) is subject to adjustment in certain events, including, among other things, stock splits or certain distributions. The warrants are exercisable immediately and expire two years from the date of issuance, provided that the warrants must be exercised simultaneously with the exercise of the additional investment right such that the percentage of the warrants that have been exercised will always equal or exceed the percentage of the additional investment right that has been exercised. The exercise price of the warrants may be paid in cash or, provided that the Initial Purchaser is solvent, through the issuance by the Initial Purchaser to us of recourse notes. The warrants are subject to cancellation, in whole or in part, as described below. See Description of Warrants.</p>
Automatic termination	<p>In the event that no portion of the warrants and/or the additional investment right has been exercised prior to the early termination date, the closing will be cancelled and the warrants will automatically terminate on the early termination date. In the event of a partial closing, the remaining unexercised portion of the warrants will automatically terminate on the early termination date.</p>
Limitations on exercise	<p>No holder may exercise its warrants to the extent that the exercise would result in the holder and its affiliates beneficially owning 9.99% or more of our common stock. To the extent such limitation applies, the holder shall first be required to convert outstanding shares of Series 11 Preferred Stock into common stock, subject to such limitation, until the holder no longer owns any shares of Series 11 Preferred Stock prior to exercising the warrants.</p>
Description of Additional Investment Right	<p>In consideration for the purchase of Series 10 Preferred Stock, the Initial Purchaser will receive the additional investment right to purchase up to 24,957 shares of Series 11 Preferred Stock. The exercise price of the additional investment right is \$1,000 per share of Series 11 Preferred Stock. The additional investment right is exercisable immediately and must be exercised in full within 30 days of the date of this prospectus supplement. The additional investment right may be exercised by the Initial Purchaser in whole or in part in one or more tranches during such period, at such times as may be determined by the Initial Purchaser. The exercise price of the additional investment right may be paid in cash or, provided that the Initial Purchaser is solvent, through the issuance by the Initial Purchaser to us of recourse notes. The additional investment right is subject to cancellation, in whole or in part, as described below. See Description of Additional Investment Right.</p>
Automatic termination	<p>In the event that no portion of the additional investment right and/or the warrants has been exercised prior to the early termination date, the closing will be cancelled and the additional investment right will automatically terminate on the early termination date. In the event of a partial closing, the remaining unexercised portion of the additional investment right will automatically terminate on the early termination date.</p>
Description of the Series 11 Preferred Stock	
Dividends	<p>Holders of the Series 11 Preferred Stock are entitled to receive dividends equal (on an as if converted to common stock basis) to and in the same form as dividends actually paid</p>

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

on shares of common stock or other junior securities, as and if such dividends are paid. We have never declared or paid any cash dividends on our common stock and do not currently

S-4

Table of Contents

anticipate declaring or paying cash dividends on our common stock in the foreseeable future. See Dividend Policy. Our outstanding shares of Series 8 Preferred Stock and the Series 10 Preferred Stock are senior to the Series 11 Preferred Stock as to dividends.

Optional conversion

The Series 11 Preferred Stock can be converted at the holder's option at any time after issuance into the number of shares of common stock determined by dividing the stated value of the Series 11 Preferred Stock of \$1,000 per share to be converted by the conversion price, which is initially \$0.337. The initial conversion price is subject to adjustment in certain events, including, among other things, stock splits or certain distributions. See Description of Series 11 Preferred Stock.

Automatic conversion

On the first to occur of (i) the date on which 1,000 or less shares of Series 11 Preferred Stock remain outstanding or (ii) the date on which our board of directors determines in good faith to do a reverse stock split with respect to our common stock in order to achieve compliance with the listing rules of The NASDAQ Capital Market or for other good faith business reasons, all outstanding shares of Series 11 Preferred Stock shall automatically convert into that number of shares of common stock determined by dividing the aggregate stated value of the Series 11 Preferred Stock being converted by the conversion price then in effect, subject only to the limitations on conversion described below.

Limitations on conversion

We cannot effect a conversion of the Series 11 Preferred Stock, and no holder may request a conversion of its Series 11 Preferred Stock, to the extent such conversion would result in the holder and its affiliates beneficially owning more than 9.99% of our common stock. In the event of an automatic conversion of the Series 11 Preferred Stock, the conversion threshold will increase to 19.99% without any further action on the part of a holder.

Liquidation preference

In the event of our voluntary or involuntary dissolution, liquidation or winding up, each holder of Series 11 Preferred Stock will be entitled to be paid a liquidation preference equal to the initial stated value of such holder's Series 11 Preferred Stock of \$1,000 per share, plus accrued and unpaid dividends and any other payments that may be due on such shares, before any distribution of assets may be made to holders of capital stock ranking junior to the Series 11 Preferred Stock. The Series 11 Preferred Stock is *pari passu* with our outstanding shares of Series 8 Preferred Stock and the Series 10 Preferred Stock as to liquidations.

Voting rights and negative covenants

The Series 11 Preferred Stock will have no voting rights, except as otherwise expressly provided in our amended and restated articles of incorporation or as otherwise required by law. However, so long as at least 20% of the aggregate originally issued shares of Series 11 Preferred Stock are outstanding, we cannot amend our amended and restated articles of incorporation, amended and restated bylaws or other charter documents so as to materially, specifically and adversely affect the rights of the Series 11 Preferred Stock, repay, repurchase or offer to repay or repurchase or otherwise acquire any of our common stock or other securities junior to the Series 11 Preferred Stock, except in certain limited circumstances, or authorize or create any class of senior preferred stock, in each case without the affirmative written consent of holders of a majority of the outstanding shares of Series 11 Preferred Stock.

Table of Contents

Use of proceeds after expenses

We may use a portion of the net proceeds from this offering to fund possible investments in, or acquisitions of, complementary businesses, technologies or products. We have recently engaged in limited discussions with third parties regarding such investments or acquisitions, but we have no current agreements or commitments with respect to any investment or acquisition. We can provide no assurance that we will enter into any such agreements or commitments or consummate any such investments or acquisitions. We may also use a portion of the net proceeds from this offering 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.

Market for the Series 10 Preferred Stock, the warrants, the additional investment right and the Series 11 Preferred Stock

There is no established public trading market for the Series 10 Preferred Stock, the warrants, the additional investment right and the Series 11 Preferred Stock and we do not expect a market to develop. In addition, we do not intend to apply for listing the Series 10 Preferred Stock, the warrants, the additional investment right or the Series 11 Preferred Stock on any securities exchange.

Market for our common stock

Our common stock is quoted on The NASDAQ Capital Market and on the MTA in Italy under the symbol CTIC. On February 17, 2011, the last reported sale price of our common stock on The NASDAQ Capital Market was \$0.3379.

Table of Contents

RISK FACTORS

You should carefully consider the risks under the heading "Risk Factors" beginning on page 17 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2010, filed with the SEC on February 16, 2011, which information is incorporated by reference in this prospectus supplement, and the additional 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 identified risks actually occur, they could materially adversely affect our business, financial condition, operating results or prospects and the trading price of 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 and the trading price of our securities.

S-7

Table of Contents

Risks Related to this Offering

We are conducting this offering without an underwriter or placement agent and may be unable to sell the securities.

This offering is self-underwritten and we have not engaged the services of an underwriter or placement agent. We intend to sell the shares of Series 10 Preferred Stock, warrants, additional investment right and Series 11 Preferred Stock through our executive officers and directors, who will receive no commissions or other remuneration for such services. There can be no assurance that our executive officers and directors will be successful in selling any of the securities offered hereby or that we will receive any proceeds from this offering.

There is no minimum number of securities that must be sold by us for this offering to proceed and there can be no assurance that this offering will be successful.

There is no minimum number of securities that must be sold by us for this offering to proceed and there can be no assurance that this offering will be successful. Even if this offering proceeds, the closing may not occur if the closing bid price of our common stock falls below \$0.2528 during the nine trading days following the date of this prospectus supplement and no portion of the warrants or the additional investment right have been exercised. Alternatively, the closing may occur for less than the full proceeds if the closing bid price of our common stock falls below \$0.2528 during the nine trading days following the date of this prospectus supplement and a portion of the warrants or the additional investment right have been exercised. In either case, we will not receive the full proceeds from this offering. In addition, even if this offering proceeds, we may not receive cash upon the exercise of the warrants or the additional investment right since they may be exercised through the issuance of recourse notes. Accordingly, you should not rely on the success of this offering to address our funding needs. If we fail to raise sufficient capital in this offering, we may seek alternative debt, equity or equity-based financing (such as convertible debt) when market conditions permit. Such financing may not be available on favorable terms, or at all.

There is no public market for the Series 10 Preferred Stock, the warrants, the additional investment right or the Series 11 Preferred Stock being offered in this offering.

There is no established public trading market for the Series 10 Preferred Stock, the warrants, the additional investment right or the Series 11 Preferred Stock being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply for listing of the Series 10 Preferred Stock, the warrants, the additional investment right or the Series 11 Preferred Stock on any securities exchange. Without an active market, the liquidity of the Series 10 Preferred Stock, the warrants, the additional investment right and the Series 11 Preferred Stock will be limited.

Purchasers of Series 11 Preferred Stock and warrants who convert their Series 11 Preferred Stock into common stock or exercise their warrants for shares of common stock will incur immediate dilution.

Upon conversion or exercise of your shares of Series 11 Preferred Stock or warrants for shares of common stock, as the case may be, you will experience immediate and substantial dilution because the per share conversion price of your shares of Series 11 Preferred Stock and 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.

Table of Contents

Holders of our Series 10 Preferred Stock will have no rights as a holder of common stock.

The shares of Series 10 Preferred Stock are not convertible into shares of common stock and holders of Series 10 Preferred Stock will have no rights with respect to our common stock. In addition, the shares of Series 10 Preferred Stock are redeemable at our option only and, until such time as we elect to redeem outstanding shares of Series 10 Preferred Stock, holders of Series 10 Preferred Stock are only entitled to receive dividends payable in the form of additional shares of Series 10 Preferred Stock.

Holders of our Series 11 Preferred Stock and warrants will have no rights as a holder of common stock until they acquire common stock.

Until you acquire shares of common stock upon conversion or exercise of the Series 11 Preferred Stock and warrants, as the case may be, you will have no rights with respect to our common stock, other than the right of the Series 11 Preferred Stock to receive dividends equal to and in the same term as dividends actually paid on common stock, including rights to vote or respond to tender offers. Upon conversion or exercise of your Series 11 Preferred Stock or warrants, as the case may be, you will be entitled to exercise the rights of a holder of common stock only as to matters for which the record date occurs after the applicable conversion or exercise date.

We may be required to effect a reverse stock split of our common stock in order to regain compliance with NASDAQ's minimum bid price requirement, in which case we will cause all outstanding shares of our Series 11 Preferred Stock to automatically convert into shares of our common stock and we will redeem all outstanding shares of Series 8 Preferred Stock and Series 10 Preferred Stock.

NASDAQ has granted us until May 2, 2011 to achieve compliance with its \$1.00 minimum bid price requirement pursuant to NASDAQ Marketplace Rule 5550(a)(2). We may achieve compliance if the closing bid price of our common stock is at least \$1.00 per share for a minimum of ten consecutive trading days before May 2, 2011. If we fail to achieve and maintain the minimum bid price for the required period, we may be delisted. In order to regain compliance with the minimum bid price requirement, we may be required to effect a reverse stock split. Pursuant to our amended and restated articles of incorporation and Washington law, our board of directors may authorize a reverse stock split without shareholder approval provided that we have only one class of securities outstanding. Accordingly, if we are required to effect a reverse stock split in order to regain compliance with NASDAQ's minimum bid price requirement, we will cause all outstanding shares of our Series 11 Preferred Stock to automatically convert into shares of our common stock and we will redeem all of the outstanding shares of our Series 8 Preferred Stock and Series 10 Preferred Stock, resulting in only one class of securities outstanding. Such conversion and/or redemption will result in the loss of the rights, preferences and privileges previously granted to the holders of Series 8 Preferred Stock, Series 10 Preferred Stock and Series 11 Preferred Stock pursuant to the terms of the applicable articles of amendment to our amended and restated articles of incorporation, including, to the extent applicable, dividend and liquidation rights.

There may be certain U.S. federal income tax consequences associated with the acquisition, ownership or disposition of the securities offered in this offering.

An investment in the securities offered hereby involves complex federal, state, local and foreign tax considerations that will differ for each prospective investor. For example, in certain cases investors may have to report taxable income in advance of receipt of cash, and certain non-U.S. investors may be subject to withholding taxes (and will not be entitled to any additional amounts to compensate them for such withholding taxes). In addition, new tax legislation may be enacted into law or new interpretations, rulings or regulations could be adopted, any of which could harm us and holders of securities offered hereby, potentially with retroactive effect. You are strongly urged to consult with your own professional advisers as to the federal, state, local and foreign tax consequences of the acquisition, ownership and disposition of the securities offered hereby.

Table of Contents

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 that our common stock ranks junior to our outstanding shares of Series 8 Preferred Stock and the Series 10 Preferred Stock, Series 11 Preferred Stock and 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 and our preferred stock may restrict payment of dividends on our common stock.

Additionally, unlike indebtedness, where principal and interest customarily are payable on specified due dates, in the case 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 common stock and have no current intention to pay dividends in the future. Furthermore, our common stock places 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 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 shares of our common stock.

Our existing and future preferred stock, warrants or other securities convertible into or exchangeable for our common stock may contain adjustment provisions that could increase the number of shares issuable upon exercise, conversion or exchange, as the case may be, and decrease the exercise, conversion or exchange price. 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, the triggering of any such adjustment provisions, or the perception that such sales could occur in the future.

The market price of our 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 February 17, 2011, our stock price has ranged from a low of \$0.12 to a high of \$1.25. 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 2011 to generate additional funds to cover our current debt and operating expenses;

Table of Contents

failure to increase our authorized common stock available for issuance;

our quarterly operating results;

developments or disputes concerning patent or other proprietary rights;

developments in our relationships with collaborative partners;

acquisitions or divestitures;

litigation and government proceedings;

adverse legislation, including changes in governmental regulation;

third-party reimbursement policies;

changes in securities analysts' recommendations;

short selling;

changes in health care policies and practices;

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

economic and other external factors; and

general market conditions.

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, we and certain of our officers and directors are named as defendants in purported securities class action and shareholder derivative lawsuits brought on behalf of a putative class of purchasers of our securities from March 25, 2008 through March 22, 2010. These lawsuits seek unspecified damages and, as with any litigation proceeding, we cannot predict with certainty the eventual outcome of pending litigation. Furthermore, we may have to incur substantial expenses in connection with these lawsuits 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 currently face or 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, in our shareholder rights plan, or rights plan, and under Washington law could make removal of incumbent management or an acquisition of us, which may be beneficial to our shareholders, more difficult.

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

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

S-11

Table of Contents

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.

Pursuant to our rights plan, an acquisition of 20% or more of our common stock could result in the exercisability of the preferred stock purchase right accompanying each share of our common stock (except those held by a 20% shareholder, which become null and void), thereby entitling the holder to receive upon exercise, in lieu of a number of units of preferred stock, that number of shares of our common stock having a market value of two times the exercise price of the right. The existence of our rights plan could have the effect of delaying, deferring or preventing a third party from making an acquisition proposal for us and may inhibit a change in control that some, or a majority, of our shareholders might believe to be in their best interest or that could give our shareholders the opportunity to realize a premium over the then-prevailing market prices for their shares.

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

Table of Contents

USE OF PROCEEDS

We estimate that the net proceeds of this offering, assuming gross proceeds of \$25 million (which is the amount of gross proceeds to be received if we sell all of the shares of Series 10 Preferred Stock offered hereby), after deducting our estimated offering expenses, including the commitment fee and excluding the proceeds, if any, from the exercise of the warrants and the additional investment right for cash, will be approximately \$23.5 million. However, we may not be successful in selling any or all of the securities offered hereby and the amount of the net proceeds of this offering may differ significantly from our estimate above.

We may use a portion of the net proceeds of this offering to fund possible investments in, or acquisitions of, complementary businesses, technologies or products. We have recently engaged in limited discussions with third parties regarding such investments or acquisitions, but we have no current agreements or commitments with respect to any investment or acquisition. We can provide no assurance that we will enter into any such agreements or commitments or consummate any such investments or acquisitions.

We may also use a portion of the net proceeds of 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 December 31, 2010):

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

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

We cannot estimate precisely the allocation of the net proceeds of 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 businesses, 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

DETERMINATION OF OFFERING PRICE

Prior to this offering, there was no public market for the Series 10 Preferred Stock, the warrants, the additional investment right or the Series 11 Preferred Stock. The terms and conditions of the Series 10 Preferred Stock, including the dividend rate and the redemption feature, the warrants, including the exercise price, the additional investment right, including the exercise price, and the Series 11 Preferred Stock, including the conversion price, were determined by us and the Initial Purchaser. The principal factors considered in determining these terms and conditions include:

the market price of our common stock;

the information set forth in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference, and otherwise available to us;

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

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

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

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

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

other factors deemed relevant by us and the Initial Purchaser.

Table of Contents**RATIO OF EARNINGS TO COMBINED FIXED CHARGES
AND PREFERRED STOCK DIVIDENDS**

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

	Year ended December 31,				
	2010	2009	2008	2007	2006
Ratio of earnings to combined fixed charges and preferred stock dividends(1)					

- (1) 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, 2010, 2009, 2008, 2007 and 2006 were insufficient to cover fixed charges and preferred stock dividends by \$147.6, \$116.8, \$202.9, \$148.3 and \$135.8 (in millions), respectively. For this reason, no ratios are provided for these periods.

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.

Our outstanding shares of Series 8 Preferred Stock are entitled to annual dividends at a rate of 10% per annum from the date of issuance, payable in the form of additional shares of Series 8 Preferred Stock. See [Description of Capital Stock](#) [General Description of Preferred Stock](#) [Series 8 Preferred Stock](#).

S-16

Table of Contents

DESCRIPTION OF SERIES 10 PREFERRED STOCK

The material terms and provisions of the Series 10 Preferred Stock being offered pursuant to this prospectus supplement and the accompanying prospectus are summarized below. This summary is subject to, and qualified in its entirety by, the rights, preferences and privileges of the Series 10 Preferred Stock set forth in the articles of amendment to our amended and restated articles of incorporation to be filed as an exhibit to a Current Report on Form 8-K, which we expect to file with the SEC in connection with this offering.

Rank

The Series 10 Preferred Stock will, with respect to rights upon our liquidation, dissolution or winding up, rank senior to our common stock and *pari passu* with our outstanding shares of Series 8 Preferred Stock and our Series 11 Preferred Stock. The Series 10 Preferred Stock will rank *pari passu* with our outstanding shares of Series 8 Preferred Stock and senior to our Series 11 Preferred Stock as to dividends.

Dividends

Holders of the Series 10 Preferred Stock are entitled to receive annual dividends on each outstanding share of Series 10 Preferred Stock, which shall accrue in the form of additional shares of Series 10 Preferred Stock at a rate equal to 10.0% per annum from the issuance date of the Series 10 Preferred Stock. Accrued dividends shall be payable upon redemption of the Series 10 Preferred Stock. Any calculation of the amount of dividends payable on shares of Series 10 Preferred Stock shall be made based on a 365-day year and on the number of days actually elapsed during the applicable period, compounded annually, and shall be rounded down to the nearest \$1,000.

Liquidation Preference

In the event of our voluntary or involuntary dissolution, liquidation or winding up, each holder of shares of Series 10 Preferred Stock will be entitled to be paid a liquidation preference equal to the initial stated value of such holder's Series 10 Preferred Stock of \$1,000 per share, plus accrued and unpaid dividends and any other payments that may be due on such shares, before any distribution of assets may be made to holders of capital stock ranking junior to the Series 10 Preferred Stock in respect of liquidation. In the event that the amount available for payment of this liquidation preference is less than the full amount of the stated value of all shares of Series 8 Preferred Stock, Series 10 Preferred Stock and Series 11 Preferred Stock then outstanding, the assets to be distributed to the holders of the Series 10 Preferred Stock will be ratably distributed among such holders and holders of Series 8 Preferred Stock and Series 11 Preferred Stock in accordance with the respective amounts that would be payable on such holder's shares if the liquidation preference was paid in full.

Conversion

The Series 10 Preferred Stock is not convertible.

Redemption

The Series 10 Preferred Stock, including any shares of Series 10 Preferred Stock representing accrued and unpaid dividends, is redeemable at our option at any time after issuance, either in cash or by offset against recourse notes. In the event that we elect to redeem shares of Series 10 Preferred Stock by offset against recourse notes, each share of Series 10 Preferred Stock (plus accrued dividends thereon, if any) shall be fully offset by \$1,350 principal amount of recourse notes (plus accrued interest thereon, if any), regardless of the issuance date of the shares of Series 10 Preferred Stock and recourse notes.

Voting Rights and Negative Covenants

The Series 10 Preferred Stock shall have no voting rights, except to the extent expressly provided in our amended and restated articles of incorporation or as otherwise required by law.

So long as at least 7,986 or more originally issued shares of Series 10 Preferred Stock are outstanding, we cannot, without the affirmative consent of holders of a majority of the outstanding shares of Series 10 Preferred Stock:

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

amend our amended and restated articles of incorporation, amended and restated bylaws or other charter documents so as to materially, specifically and adversely affect the rights of any holder with respect to the Series 10 Preferred Stock;

authorize or create any class or series of stock ranking senior to the Series 10 Preferred Stock as to dividend rights in respect of additional shares of Series 10 Preferred Stock or liquidation preference; or

enter into any agreement or understanding with respect to any of the foregoing.

S-17

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 a 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 two years after the date of issuance, provided that the warrants must be exercised simultaneously with the exercise of the additional investment right such that the percentage of the warrants that have been exercised will always equal or exceed the percentage of the additional investment right that has been exercised. The warrants will be exercisable, from time to time at the option of the holder, upon the surrender of the warrants to us and the payment of the exercise price of the shares of common stock being acquired upon exercise of the warrants in cash or, provided that the Initial Purchaser is solvent, through the issuance by the Initial Purchaser to us of recourse notes. The exercise price per share of common stock purchasable upon exercise of the warrants is \$0.337 per share of common stock being purchased. The exercise price (and, in certain circumstances, the number of shares of common stock issuable upon exercise of the warrants) is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our common stock.

In the event that no portion of the warrants and/or the additional investment right has been exercised prior to the early termination date, the closing will be cancelled and the warrants will automatically terminate on the early termination date. In the event that all or any portion of the warrants and/or the additional investment right have been exercised prior to the early termination date, we may (i) require the Initial Purchaser to purchase the adjusted number of shares of common stock upon exercise of the warrants, in which case the balance of the unexercised portion of the warrants in excess of the adjusted number of warrants will automatically terminate on the early termination date, or (ii) elect to cancel the closing, in which case the unexercised warrants will automatically terminate on the early termination date.

The holders of the warrants are entitled to 20 days' notice before the record date for certain distributions to holders of our common stock. If certain fundamental transactions occur, such as a merger, consolidation, sale of substantially all of our assets, tender offer or exchange offer with respect to our common stock or reclassification of our common stock, the holders of the warrants will be entitled to receive thereafter in lieu of our common stock, the consideration (if different from common stock) that the holders of 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. 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.

The warrants will not be listed on any national securities exchange.

As of February 17, 2011, other warrants to purchase approximately 91.2 million shares of common stock are outstanding.

Beneficial Ownership Limitation

No holder may exercise its warrants to the extent that the exercise would result in the holder and its affiliates beneficially owning 9.99% or more of our common stock. The amount of beneficial ownership of the holder and its affiliates will be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations of that section. To the extent that such limitation applies, the holder shall first be required to convert outstanding shares of Series 11 Preferred Stock into common stock, subject to such limitation, until the holder no longer owns any shares of Series 11 Preferred Stock prior to exercising the warrants.

Table of Contents

DESCRIPTION OF ADDITIONAL INVESTMENT RIGHT

The material terms and provisions of the additional investment right 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 Securities Purchase Agreement to be filed as an exhibit to a Current Report on Form 8-K, which we expect to file with the SEC in connection with this offering.

General

The additional investment right is exercisable immediately and must be exercised in full within 30 days of the date of this prospectus supplement. The additional investment right may be exercised by the Initial Purchaser in whole or in part in one or more tranches during such period, at such times as may be determined by the Initial Purchaser. The exercise price of the additional investment right may be paid in cash or, provided that the Initial Purchaser is solvent, through the issuance by the Initial Purchaser to us of recourse notes. The exercise price per share of Series 11 Preferred Stock purchasable upon exercise of the additional investment right is \$1,000 per share of Series 11 Preferred Stock being purchased.

In the event that no portion of the additional investment right and/or the warrants has been exercised prior to the early termination date, the closing will be cancelled and the additional investment right will automatically terminate on the early termination date. In the event that all or any portion of the additional investment right and/or the warrants have been exercised prior to the early termination date, we may (i) require the Initial Purchaser to purchase the adjusted number of shares of Series 11 Preferred Stock upon exercise of the additional investment right, in which case the balance of the unexercised portion of the additional investment right in excess of the adjusted additional investment right will automatically terminate on the early termination date, or (ii) elect to cancel the closing, in which case the unexercised additional investment right will automatically terminate on the early termination date.

The additional investment right will not be listed on any national securities exchange.

Table of Contents

DESCRIPTION OF SERIES 11 PREFERRED STOCK

The material terms and provisions of the Series 11 Preferred Stock being offered pursuant to this prospectus supplement and the accompanying prospectus are summarized below. This summary is subject to, and qualified in its entirety by, the rights, preferences and privileges of the Series 11 Preferred Stock set forth in the articles of amendment to our amended and restated articles of incorporation to be filed as an exhibit to a Current Report on Form 8-K, which we expect to file with the SEC in connection with this offering.

Rank

The Series 11 Preferred Stock will, with respect to rights upon our liquidation, dissolution or winding up, rank senior to our common stock and *pari passu* with our outstanding shares of Series 8 Preferred Stock and our Series 10 Preferred Stock, and, with respect to dividend rights, rank senior to our common stock and junior to our outstanding shares of Series 8 Preferred Stock and our Series 10 Preferred Stock.

Dividends

Holders of Series 11 Preferred Stock are entitled to receive dividends on shares of the Series 11 Preferred Stock equal (on an as if converted to common stock basis) to and in the same form as dividends actually paid on shares of our common stock or other junior securities. All accrued but unpaid dividends on the Series 11 Preferred Stock shall increase the stated value of the Series 11 Preferred Stock, but when such dividends are actually paid such increase shall be rescinded.

Liquidation Preference

In the event of our voluntary or involuntary dissolution, liquidation or winding up, each holder of shares of Series 11 Preferred Stock will be entitled to be paid a liquidation preference equal to the initial stated value of such holder's Series 11 Preferred Stock of \$1,000 per share, plus accrued and unpaid dividends and any other payments that may be due on such shares, before any distribution of assets may be made to holders of capital stock ranking junior to the Series 11 Preferred Stock. In the event that the amount available for payment of this liquidation preference is less than the full amount of the stated value of all shares of Series 8 Preferred Stock, Series 10 Preferred Stock and Series 11 Preferred Stock then outstanding, the assets to be distributed to the holders of the Series 11 Preferred Stock will be ratably distributed among such holders and holders of Series 8 Preferred Stock and Series 10 Preferred Stock in accordance with the respective amounts that would be payable on such holder's shares if the liquidation preference was paid in full.

Conversion

Optional Conversion

The Series 11 Preferred Stock shall be convertible at the option of the holders thereof at any time after issuance into the number of registered shares of common stock determined by dividing the aggregate stated value of the Series 11 Preferred Stock being converted by the conversion price then in effect. The initial conversion price is \$0.337 and is subject to adjustment as described below. This right to convert is limited by the beneficial ownership limitation described below.

Automatic Conversion

On the first to occur of (i) the date on which 1,000 or less shares of Series 11 Preferred Stock remain outstanding or (ii) the date on which our board of directors determines in good faith to do a reverse stock split with respect to our common stock in order to achieve compliance with the listing rules of The NASDAQ Capital Market or for other good faith business reasons, all outstanding shares of Series 11 Preferred Stock shall automatically convert into the number of registered shares of common stock determined by dividing the aggregate stated value of the Series 11 Preferred Stock being converted by the conversion price then in effect. This automatic conversion is limited by the beneficial ownership limitation described below.

Table of Contents

Beneficial Ownership Limitation

We may not effect a conversion, and no holder may request conversion, of the Series 11 Preferred Stock to the extent that, following such conversion, the holder and its affiliates would beneficially own more than 9.99% of our common stock. In the event of an automatic conversion, the conversion threshold will increase to 19.99% without any further action on the part of a holder. The amount of beneficial ownership of a holder and its affiliates will be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations of that section.

Conversion Price Adjustment

Stock Dividends and Stock Splits. If we pay a stock dividend or otherwise make a distribution payable in shares of common stock on shares of common stock or any common stock equivalents, subdivide or combine our outstanding common stock, or reclassify our common stock in such a way that we issue additional shares of our capital stock, the conversion price will be adjusted by multiplying the then-existing conversion price by a fraction, the numerator of which is the number of shares outstanding immediately before the distribution, dividend, adjustment or recapitalization and the denominator of which is the number of shares outstanding immediately after such action.

Rights Offerings. If we issue rights, options or warrants to holders of common stock giving such holders a right to subscribe for or purchase shares of common stock at a price per share lower than the volume weighted average price of the common stock on the record date for such issuance and do not offer the same rights to the holders of the Series 11 Preferred Stock, the conversion price will be adjusted to reflect the rights offering by multiplying such conversion price by a fraction, the numerator of which is the number of shares outstanding before such record date plus the number of shares which the aggregate offering price (assuming full subscription) would purchase at the volume weighted average price of the common stock on such record date and the denominator of which is the number of shares of common stock outstanding on the record date plus the aggregate number of shares offered for subscription or purchase.

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

Fundamental Transaction. If we effect a fundamental transaction (as defined below), then upon any future conversion of the Series 11 Preferred Stock, the holders will have the right to receive, for each share of common stock they would have received upon such conversion, the same kind and amount of securities, cash or property as such holder would have been entitled to receive in the transaction had it been the holder of a share of common stock immediately prior to the transaction. The term fundamental transaction means any of the following:

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

the sale of all or substantially all of the assets of the Company in one transaction or a series of related transactions; provided, however, that for the purposes of this bullet, a fundamental transaction shall not include us entering into a license or other agreement that licenses any intellectual property to an unaffiliated and unrelated person so long as we and our subsidiaries continue to have bona fide, substantial and continuing business operations and activities after such license or other agreement is entered into;

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

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

Table of Contents

If the holders of common stock are given a choice as to the securities, cash or property to be received in a fundamental transaction, the holders of Series 11 Preferred Stock will be given the same choice on conversion of such holder's shares.

Voting Rights and Negative Covenants

The Series 11 Preferred Stock shall have no voting rights, except to the extent expressly provided in our amended and restated articles of incorporation or as otherwise required by law. However, so long as at least 20% of the aggregate initially issued shares of Series 11 Preferred Stock are outstanding, we cannot take any of the following actions without the affirmative consent of holders of a majority of the outstanding shares of Series 11 Preferred Stock:

amend our amended and restated articles of incorporation, amended and restated bylaws or other charter documents so as to materially, specifically and adversely affect the rights of any holder with respect to the Series 11 Preferred Stock;

repay, repurchase or offer to repay or repurchase or otherwise acquire any of our common stock, common stock equivalents or securities junior to the Series 11 Preferred Stock, except the repurchase of up to 30,000,000 shares of common stock in any 12-month period from employees, officers, directors, consultants or others performing services for the Company or any of its subsidiaries under agreements approved by a majority of our board of directors or under which we have the option to repurchase such shares at cost or at cost on the occurrence of certain events such as termination of employment;

authorize or create any class of senior preferred stock with respect to dividend rights or liquidation preference; or

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

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 amended and restated bylaws and all applicable provisions of Washington law.

General

We are authorized to issue 1,200,000,000 shares of common stock, no par value, and 10,000,000 shares of preferred stock, no par value. As of February 17, 2011, there were 900,787,566 shares of common stock outstanding, warrants to purchase approximately 91.2 million shares of common stock outstanding and 25,000 shares of Series 8 Preferred Stock outstanding.

On April 15, 2007, we effected a 1-for-4 reverse stock split of our common stock and on August 31, 2008, we effected a 1-for-10 reverse stock 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 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

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 the common stock. It is not possible to state the actual effects of the issuance of any shares of preferred stock upon the rights of holders of the common stock until our board of directors determines the specific rights of the holders of this preferred stock. However, the effects might include, among other things:

restricting dividends on the common stock;

diluting the voting power of the common stock;

impairing the liquidation rights of the common stock; or

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

Series 8 Preferred Stock

As of February 17, 2011, there were 25,000 shares of our Series 8 Preferred Stock outstanding. The Series 8 Preferred Stock is entitled to annual dividends at a rate of 10% per annum from the date of issuance, payable in the form of additional shares of Series 8 Preferred Stock. Each share of Series 8 Preferred Stock is entitled to a liquidation preference equal to the initial stated value of \$1,000 per share of Series 8 Preferred Stock, plus any accrued and unpaid dividends, before any distribution of assets may be made to holders of capital stock ranking junior to the Series 8 Preferred Stock. The Series 8 Preferred Stock is *pari passu* with the Series 10 Preferred Stock as to dividends and liquidation, *pari passu* with the Series 11 Preferred Stock as to liquidation and senior to the Series 11 Preferred Stock as to dividends. The Series 8 Preferred Stock is not convertible into common stock but is redeemable, at our option, at any time after issuance, either in cash or by offset against recourse notes fully

secured with marketable securities. The Series 8 Preferred Stock has no voting rights except as otherwise expressly provided in the articles of amendment to our amended and restated articles of incorporation or as otherwise required by law. However, so long as at least 8,000 or more originally issued shares of Series 8 Preferred Stock are outstanding, we cannot amend our amended and restated articles of incorporation, amended and restated bylaws or other charter documents so as to materially, specifically and adversely affect the rights of the Series 8 Preferred Stock or authorize or create any class of senior preferred stock, in each case without the affirmative written consent of holders of a majority of the outstanding shares of Series 8 Preferred Stock.

Anti-Takeover Effects of Provisions of Washington Law, Our Charter and Bylaws and Our Rights Plan

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 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

Table of Contents

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 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 our 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.

In connection with our rights plan, one preferred stock purchase right was distributed for each common share held as of the close of business on January 7, 2010. Initially, the rights are not exercisable and are attached to, and trade with, all of the shares of our common stock outstanding as of, and issued subsequent to, the record date. Each right, if and when it becomes exercisable, will entitle the holder to purchase one ten-thousandth of a share of a new series of junior participating cumulative preferred stock for \$6.00, subject to standard adjustment in the rights plan. The rights will become exercisable for our preferred stock if a person or group acquires 20% or more of our common stock. Upon acquisition of 20% or more of our common stock, the board of directors could decide that each right (except those held by a 20% shareholder, which become null and void) would become exercisable, entitling the holder to receive upon exercise, in lieu of a number of units of preferred stock, that number of shares of our common stock having a market value of two times the exercise price of the right. In certain circumstances, including if there are insufficient shares of our common stock to permit the exercise in full of the rights, the holder may receive units of preferred stock, other securities, cash or property or any combination of the foregoing.

If we are acquired in a merger or other business combination transaction after any such event, each holder of a right, except those held by a 20% shareholder, which become null and void, would then have the right to receive, upon exercise, common stock of the acquiring company having a market value equal to two times the exercise price of the right.

Our board of directors may redeem the rights for \$0.0001 per right or terminate the rights plan at any time prior to an acquisition by a person or group holding 20% or more of our common stock. The rights plan will expire on January 7, 2013.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A.

Table of Contents

CERTAIN U.S. FEDERAL INCOME TAX CONSIDERATIONS

The following discussion describes certain U.S. federal income tax consequences to U.S. Holders (as defined below) associated with the purchase, ownership, conversion or exercise, as the case may be, and disposition of the Series 10 Preferred Stock, Series 11 Preferred Stock, warrants and the additional investment right and the ownership and disposition of shares of common stock issuable upon conversion of Series 11 Preferred Stock and exercise of the warrants. This discussion is based upon the provisions of the Internal Revenue Code of 1986, as amended, or the Code, the final and temporary Treasury regulations promulgated thereunder and administrative rulings and judicial decisions in effect as of the date of this prospectus supplement, all of which are subject to change (possibly with retroactive effect) or different interpretations. This summary does not purport to deal with all aspects of U.S. federal income taxation that may be relevant to an investor's decision to purchase the securities offered hereby, nor any tax consequences arising under the laws of any state, locality or foreign jurisdiction. This summary is not intended to be applicable to all categories of investors, such as dealers in securities, banks, thrifts, or other financial institutions, insurance companies, regulated investment companies, tax-exempt organizations, partnerships and other entities classified as partnerships for U.S. federal income tax purposes or investors therein, S corporations and any investors therein, U.S. expatriates, persons that hold the Series 10 Preferred Stock, Series 11 Preferred Stock or common stock as part of a straddle, conversion transaction or hedge, persons deemed to sell the securities offered hereby under the constructive sale provisions of the Code, persons whose functional currency is other than the U.S. dollar, holders subject to the alternative minimum tax, or holders that are not U.S. Holders, each of which may be subject to special rules. In addition, this discussion is limited to U.S. Holders who hold the securities offered hereby as capital assets (generally, property held for investment) within the meaning of Section 1221 of the Code and who purchase their securities pursuant to this offering.

A U.S. Holder means a beneficial owner of securities offered hereby who is for U.S. federal income tax purposes:

an individual citizen or resident of the United States;

a corporation (or other entity taxable as a corporation) created or organized in or under the laws of the United States, any state thereof or the District of Columbia;

an estate the income of which is subject to U.S. federal income taxation regardless of its source; or

a trust if it (1) is subject to the primary supervision of a court within the United States and one or more U.S. persons have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable Treasury regulations to be treated as a U.S. person.

If a partnership or other entity or arrangement treated as a partnership for U.S. federal income tax purposes holds securities, the tax treatment of a partner will generally depend upon the status of the partner and the activities of the partnership. If you are a partner of a partnership purchasing securities, we urge you to consult your own tax advisor.

THIS SECTION IS NOT A SUBSTITUTE FOR CAREFUL TAX PLANNING. YOU SHOULD CONSULT YOUR OWN TAX ADVISOR REGARDING THE SPECIFIC FEDERAL, STATE, LOCAL, FOREIGN AND OTHER TAX CONSEQUENCES TO YOU REGARDING THE PURCHASE, OWNERSHIP AND SALE OF THE SECURITIES BEING OFFERED BY THIS PROSPECTUS. YOU SHOULD ALSO CONSULT WITH YOUR TAX ADVISOR REGARDING THE IMPACT OF POTENTIAL CHANGES IN THE APPLICABLE TAX LAWS.

Allocation of Purchase Price

Because a U.S. Holder is acquiring Series 10 Preferred Stock and is also receiving the additional investment right and the warrants, the purchase price may need to be allocated between the Series 10 Preferred Stock, the additional investment right and the warrants based on their respective fair market values.

Table of Contents

Exercise of Warrants or Additional Investment Right

Upon exercise by a U.S. Holder of the warrants or additional investment right, as applicable, the U.S. Holder's basis in the warrants, or additional investment right, as applicable, will be added to such U.S. Holder's basis in the common stock, or Series 11 Preferred Stock, as applicable, received in exchange therefor. The U.S. Holder's holding period with respect to the common stock or Series 11 Preferred Stock, as applicable, begins on the day after exercise.

Distributions

Series 11 Preferred Stock and Common Stock Actual Distributions

The amount of any distribution to a U.S. Holder with respect to our Series 11 Preferred Stock or common stock will be treated as a dividend, to the extent of our current or accumulated earnings and profits (earnings and profits), as determined under U.S. federal income tax principles. To the extent the amount of such distribution exceeds our earnings and profits, the excess will be applied against and will reduce a U.S. Holder's tax basis (on a dollar-for-dollar basis) in the Series 11 Preferred Stock or common stock, as the case may be. Any amount in excess of a U.S. Holder's tax basis will be taxable as capital gain.

Series 10 Preferred Stock Deemed Distributions

The Series 10 Preferred Stock likely will be considered preferred stock with a mandatory redemption feature within the meaning of the Treasury regulations issued under Section 305 of the Code, with the result that there is a redemption premium that must be accrued under principles similar to those that apply with respect to debt instruments issued with original issue discount, or OID. Given the accrual of dividends on the Series 10 Preferred Stock and certain other features (including the possible allocation of amounts to the warrants and the additional investment right, as described above), it is expected that U.S. Holders of Series 10 Preferred Stock will have constructive or deemed distributions of additional stock under Section 305(c) of the Code. Such deemed distributions will be treated as actual distributions of preferred stock, which should constitute dividends, a return of capital or capital gain in the same manner as actual cash distributions on the Series 11 Preferred Stock or common stock, as discussed above under the heading **Distributions Series 11 Preferred Stock and Common Stock Actual Distributions**. Deemed distributions treated as dividends will be includible in the taxable income of a U.S. Holder in advance of the receipt of any corresponding cash payments from us. Accordingly, as with OID (if the Series 10 Preferred Stock were classified as debt for U.S. federal income tax purposes), U.S. Holders may need to fund their tax liability resulting from their investment in the Series 10 Preferred Stock from other sources.

U.S. Holders should consult their own tax advisors about the possibility and the tax consequences to them of the receipt of deemed distributions on the Series 10 Preferred Stock.

Dividends to Corporate Shareholders

In general, an actual or deemed distribution which is treated as a dividend for U.S. federal income tax purposes (*i.e.*, paid out of our earnings and profits) and is made to a corporate shareholder with respect to the Series 10 Preferred Stock, Series 11 Preferred Stock or common stock may qualify for the 70% dividends-received deduction under Section 243 of the Code (subject to certain limitations and anti-abuse provisions, described below). There can be no assurance, however, that the amount of distributions made (or deemed made) with respect to the Series 10 Preferred Stock, Series 11 Preferred Stock or the common stock will exceed the amount of our earnings and profits currently or in the future. Accordingly, there can be no assurance that the dividends-received deduction will be available in respect of distributions on such preferred stock or common stock.

In addition, there are many exceptions and restrictions relating to the availability of such dividends-received deduction such as restrictions relating to:

the holding period of stock the dividends on which are sought to be deducted;

debt-financed portfolio stock;

Table of Contents

dividends treated as extraordinary dividends for purposes of Section 1059 of the Code; and

taxpayers that pay corporate alternative minimum tax.

Corporate shareholders should consult their own tax advisors regarding the extent, if any, to which such exceptions and restrictions may apply to their particular situation.

Adjustment of Conversion Price

U.S. Holders of Series 11 Preferred Stock may, in certain circumstances, be deemed to have received constructive distributions of stock if the conversion rate for such preferred stock is adjusted. Adjustments to the conversion price made pursuant to a bona fide reasonable adjustment formula that has the effect of preventing the dilution of the interest of the holders of the preferred stock (and not increasing their interest in us or our assets), however, generally will not be considered to result in a constructive distribution of stock. Certain of the possible adjustments provided in the anti-dilution provisions of the Series 11 Preferred Stock, including, without limitation, adjustments in respect of stock dividends or the distribution of rights to subscribe for common stock should qualify as being pursuant to a bona fide reasonable adjustment formula and should not result in a constructive distribution. In contrast, other adjustments may not qualify as being pursuant to a bona fide reasonable adjustment formula. Accordingly, in certain circumstances U.S. Holders of Series 11 Preferred Stock may be deemed to have received constructive distributions in amounts based upon the value of such holders' increased interests in our equity resulting from such adjustments. The amount of the distribution will be treated as a distribution to a holder with the tax consequences specified above. Accordingly, U.S. Holders of Series 11 Preferred Stock could be considered to have received distributions taxable as dividends to the extent of our earnings and profits even though they did not receive any cash or property as a result of such adjustments.

Sale or Other Disposition

Upon a sale, exchange or other disposition of Series 10 Preferred Stock, Series 11 Preferred Stock or common stock (other than an exchange of Series 11 Preferred Stock for common stock pursuant to the conversion privilege which is discussed below), a U.S. Holder generally will recognize capital gain or loss equal to the difference between the amount of cash and the fair market value of property received on the sale, exchange or other disposition of the Series 10 Preferred Stock, Series 11 Preferred Stock or common stock and the U.S. Holder's adjusted tax basis in the Series 10 Preferred Stock, Series 11 Preferred Stock or common stock, as applicable. Such capital gain or loss will be long-term capital gain or loss if the holding period for the Series 10 Preferred Stock, Series 11 Preferred Stock or common stock, as applicable, is more than one year. Long-term capital gains may qualify for reduced rates under U.S. federal income tax laws.

We may elect to redeem the Series 10 Preferred Stock at our option at any time after issuance, either in cash or by cancellation of recourse notes. In the event that we elect to redeem shares of Series 10 Preferred Stock by offset against recourse notes, each share of Series 10 Preferred Stock (plus accrued dividends thereon, if any) shall be fully offset by \$1,350 principal amount of recourse notes (plus accrued interest thereon, if any), regardless of the issuance date of the shares of Series 10 Preferred Stock and recourse notes. The U.S. federal income tax treatment of such a redemption to a U.S. Holder will depend on the particular facts relating to such holder at the time of the redemption. A redemption generally will be treated as capital gain or loss from the sale or other disposition of the Series 10 Preferred Stock (as discussed in the preceding paragraph), if, taking into account stock that is actually or constructively owned as determined under Section 318 of the Code:

the U.S. Holder's interest in our common and preferred stock is completely terminated as a result of such redemption;

the U.S. Holder's percentage ownership in our voting stock immediately after such redemption is less than 80% of its percentage ownership immediately before such redemption; or

such redemption is not essentially equivalent to a dividend (within the meaning of Section 302(b)(1) of the Code).

Table of Contents

If none of the above tests giving rise to sale treatment is satisfied, then a payment made in redemption of the Series 10 Preferred Stock generally will be treated as a distribution that is taxable in the same manner as described above in *Distributions Series 11 Preferred Stock and Common Stock Actual Distributions* and, if applicable, *Distributions Dividends to Corporate Shareholders* and the U.S. Holder's adjusted tax basis in the redeemed Series 10 Preferred Stock will be transferred to any remaining shares it hold in us. If a U.S. Holder does not retain any stock ownership in us following such redemption, then it may lose its basis completely.

If we elect to redeem the Series 10 Preferred Stock by cancelling recourse notes, a U.S. Holder may have to realize cancellation of debt income, or COD income. In general, COD income is the amount by which the face amount of the discharged indebtedness exceeds any consideration given in exchange therefor. In certain cases a U.S. Holder may be able to defer or even exclude COD income. The rules governing COD income are complex, and U.S. Holders are urged to consult their own tax advisors in this regard.

Conversion of Series 11 Preferred Stock

A U.S. Holder generally will not recognize gain or loss by reason of receiving common stock in exchange for Series 11 Preferred Stock upon conversion of such preferred stock. The adjusted tax basis of the common stock so acquired will be equal to the U.S. Holder's tax basis in the shares of Series 11 Preferred Stock exchanged, and the holding period of the common stock received will include the holding period of the Series 11 Preferred Stock exchanged. The tax basis of any common stock treated as a constructive distribution will be equal to its fair market value on the date of the exchange, and the holding period of such common stock will commence on the day after the exchange.

Backup Withholding

Under the backup withholding provisions of the Code and applicable Treasury regulations, a U.S. Holder may be subject to backup withholding with respect to dividends (including constructive dividends) paid on, or the proceeds of a sale, exchange or redemption of, Series 10 Preferred Stock, Series 11 Preferred Stock or common stock unless:

the U.S. Holder is a corporation or other exempt payee and appropriately establishes this exemption; or

the U.S. Holder or other payee provides a taxpayer identification number, certifies under penalties of perjury that such number is correct and otherwise complies with the backup withholding rules.

Backup withholding is not an additional tax. The amount of any backup withholding from a payment will be allowed as a credit against a U.S. Holder's U.S. federal income tax liability and may entitle it to a refund, provided that the required information is timely and properly furnished by such U.S. Holder to the Internal Revenue Service, or the IRS.

Possible Legislative or Other Actions Affecting Tax Consequences

U.S. Holders should recognize that the present U.S. federal income tax treatment described above may be modified by legislative, judicial or administrative action at any time and that any such action may affect investments and commitments previously made. The rules dealing with U.S. federal income taxation are constantly under review by persons involved in the legislative process and by the IRS and the Treasury, resulting in revisions of regulations and revised interpretations of established concepts as well as statutory changes. Revisions in federal tax laws and interpretations thereof could affect the tax consequences of an investment in us.

Table of Contents

PLAN OF DISTRIBUTION

We are conducting this offering on a self-underwritten, best efforts basis and there will be no underwriter or placement agent involved in the sale of these securities. We intend to sell the shares of Series 10 Preferred Stock at a fixed price of \$1,000 per share to the Initial Purchaser. We currently anticipate that the closing of the sale of the shares of common stock will occur on March 4, 2011.

These securities will be sold on our behalf by our executive officers and directors. None of our executive officers or directors is a registered broker-dealer or an affiliate of a broker-dealer, and to the extent that our executive officers and directors sell these securities, no commissions or other remuneration based either directly or indirectly on transactions in securities will be paid to such persons.

The estimated offering expenses payable by us in connection with this offering are \$1.4 million, which include the commitment fee and legal, accounting and printing costs and various other fees associated with registering and listing the shares of common stock with the SEC and NASDAQ, respectively.

We are subject to a lock-up agreement for a period of 60 days following the date of this prospectus supplement. Pursuant to the lock-up agreement, we have agreed that neither we nor any subsidiary will, without the prior consent of the Initial Purchaser, (i) directly or indirectly, issue, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase or otherwise transfer or dispose of any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock or file any registration statement under the Securities Act (other than a Registration Statement on Form S-8) with respect to any of the foregoing, or (ii) enter into any swap or any other agreement or any transaction that transfers, in whole or in part, directly or indirectly, the economic consequence of ownership of our common stock, whether any such swap or transaction described in clause (i) or (ii) above is to be settled by delivery of common stock or such other securities, in cash or otherwise. However, during the lock-up period, we are permitted to negotiate and/or otherwise prepare to consummate a transaction following the expiration of the lock-up period so long as we do not publicly announce the transaction prior to the expiration of the lock-up period. The lock-up agreement does not apply to (a) the securities to be issued and sold in this offering or issuable upon conversion or exercise of the Series 11 Preferred Stock and warrants, (b) issuances of shares of common stock issuable upon conversion or exchange of currently outstanding convertible notes, (c) issuances of shares of common stock upon the exercise of currently outstanding warrants or amendments to the warrant agreements related thereto, (d) granting options or other securities under our incentive compensation plans existing on the date of this prospectus supplement or issuances of shares of common stock issuable in connection with outstanding awards thereunder as of the date of this prospectus supplement, (e) issuances of shares of common stock issuable pursuant to agreements in effect as of the date of this prospectus supplement or amendments related thereto, (f) issuances of shares of common stock in connection with strategic acquisitions, or (g) issuances of shares of common stock subject to shareholder approval; provided, however, that in the case of clauses (b) and (c) above, no shares of common stock shall be issued as a result of an amendment to such securities after the date of this prospectus supplement and prior to the expiration of the lock-up period.

We have also agreed that we will not, without the prior written consent of the Initial Purchaser, combine (including by way of reverse stock-split) our outstanding shares of common stock into a smaller number of shares or publicly announce our intention to effect a combination, either in a press release, proxy or other regulatory filing or similar notification to the public prior to April 1, 2011.

The Securities Purchase Agreement includes a non-binding expression of interest by the Initial Purchaser to potentially invest up to an additional \$10.0 million on terms to be negotiated at a later date by us and the Initial Purchaser. Any such offer and sale of securities would be commenced and completed in accordance with applicable securities laws. As a non-binding expression of interest, there can be no assurance that any such future offer and sale will be commenced and/or completed.

The Securities Purchase Agreement with the Initial Purchaser will be included as an exhibit to a Current Report on Form 8-K that we expect to file with the SEC in connection with this offering.

Table of Contents

LEGAL MATTERS

Certain legal matters relating to Washington law will be passed upon for us by Karr Tuttle Campbell of Seattle, Washington.

S-30

Table of Contents

PROSPECTUS

Making cancer more treatable

\$150,000,000

Common Stock

Preferred Stock

Debt Securities

Warrants

Rights

Units

From time to time, we may offer and sell in one or more offerings:

shares of our common stock;

shares of our preferred stock;

debt securities;

warrants to purchase common stock, preferred stock and/or debt securities;

rights to purchase common stock, preferred stock and/or debt securities; and

units consisting of two or more of these classes or series of securities.

We may offer these securities in amounts, at prices and on terms determined at the time of each offering thereof. Each time we offer securities using this prospectus, we will provide specific terms of the securities and the offering in one or more supplements to this prospectus. The prospectus supplements may also add to, update or change the information in this prospectus and will also describe the specific manner in which we will offer the securities. The securities may be offered and sold by us to or through one or more underwriters, broker-dealers or agents, or directly to purchasers on a continuous or delayed basis. See Plan of Distribution.

This prospectus may not be used by us to sell securities unless accompanied by a prospectus supplement. You should carefully read this prospectus and any accompanying prospectus supplement, including the information incorporated by reference, prior to investing in any of our

securities.

Our common stock is quoted on The NASDAQ Capital Market and on the MTA stock market in Italy under the symbol CTIC. On February 14, 2011, the last reported sale price of our common stock on The NASDAQ Capital Market was \$0.34. We do not expect our preferred stock, debt securities, warrants, rights or units to be listed on any securities exchange or over-the-counter market unless otherwise described in the applicable prospectus supplement.

Investing in our securities involves a high degree of risk. See the Risk Factors section contained in this prospectus and in the documents we incorporate by reference in this prospectus to read about factors you should consider before investing in our securities.

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 February 15, 2011

Table of Contents

TABLE OF CONTENTS

	Page
<u>ABOUT THIS PROSPECTUS</u>	1
<u>WHERE YOU CAN FIND MORE INFORMATION</u>	1
<u>INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE</u>	2
<u>SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS</u>	3
<u>SUMMARY</u>	4
<u>RISK FACTORS</u>	13
<u>RATIO OF EARNINGS TO FIXED CHARGES AND OF EARNINGS TO COMBINED FIXED CHARGES AND PREFERRED STOCK DIVIDENDS</u>	19
<u>USE OF PROCEEDS</u>	19
<u>DIVIDEND POLICY</u>	19
<u>DESCRIPTION OF CAPITAL STOCK</u>	20
<u>DESCRIPTION OF DEBT SECURITIES</u>	23
<u>DESCRIPTION OF WARRANTS</u>	30
<u>DESCRIPTION OF RIGHTS</u>	34
<u>DESCRIPTION OF UNITS</u>	34
<u>LEGAL OWNERSHIP OF SECURITIES</u>	35
<u>PLAN OF DISTRIBUTION</u>	39
<u>LEGAL MATTERS</u>	43
<u>EXPERTS</u>	43

Table of Contents

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or the SEC, utilizing a shelf registration process. Under the shelf registration process, we may, from time to time, sell common stock, preferred stock, debt securities, warrants, rights, units, or any combination of these securities, in one or more offerings. 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 that offering, including the specific amounts, prices and terms of the securities offered. Any prospectus supplement may also add to, update or change information contained in this prospectus.

You should read this prospectus, any prospectus supplement, any documents that we incorporate by reference in this prospectus and in any prospectus supplement, and the additional information described below under **Where You Can Find More Information** before making an investment decision. You should rely only on the information contained or incorporated by reference in this prospectus and any 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 not assume that the information in this prospectus, any prospectus supplement or any documents we incorporate by reference herein or therein is accurate as of any date other than the date on the front of those documents only. Our business, financial condition, results of operations and prospects may have changed since those dates.

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

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 SEC. Such reports, proxy statements and other information filed by us are available to the public free of charge at www.sec.gov. Copies of certain information filed by us with the SEC are also available on our website at 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 is part of a registration statement that we filed with the SEC. This prospectus omits 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 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

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

SEC rules allow us to incorporate by reference in 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 of which this prospectus forms a part is terminated or completed:

our Annual Report on Form 10-K for the fiscal year ended December 31, 2009;

our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2010;

our Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2010;

our Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 2010;

our Current Reports on Form 8-K filed with the SEC on January 19, 2010 (excluding Item 7.01 and Exhibit 99.1), February 9, 2010 (Item 8.01 only), February 22, 2010, March 2, 2010 (Item 8.01 only), March 5, 2010, March 22, 2010 (Item 8.01 only), April 5, 2010 (excluding Item 7.01 and Exhibit 99.1), April 6, 2010, April 9, 2010 (Item 8.01 only), April 15, 2010 (Item 2.05 only), May 4, 2010 (Item 3.01 only), May 20, 2010 (Item 3.02 only), May 26, 2010, May 27, 2010 (excluding Item 7.01 and Exhibit 99.1), June 29, 2010 (Item 8.01 only), July 14, 2010, July 26, 2010, July 27, 2010, August 24, 2010, September 17, 2010 (excluding Item 7.01 and Exhibit 99.1), October 6, 2010, as amended by the Current Report on Form 8-K/A filed with the SEC on October 25, 2010, October 22, 2010 (excluding Item 7.01 and Exhibit 99.1), October 28, 2010, November 4, 2010 (Item 3.01 only) and January 18, 2011 (excluding Item 7.01 and Exhibit 99.1), as amended by the Current Report on Form 8-K/A filed with the SEC on January 28, 2011; and

the description of our capital stock contained in our Registration Statement 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.

We will provide without charge to each person, including any beneficial owners, to whom this prospectus is delivered, upon his or her written or oral request, a copy of any or all documents referred to above which have been or may be incorporated by reference in this prospectus but not delivered with this prospectus, excluding exhibits to those documents unless they are specifically incorporated by reference into those documents. You may request a copy of these documents by writing or telephoning us at the following address:

Cell Therapeutics, Inc.

501 Elliott Avenue West, Suite 400

Seattle, Washington 98119

(206) 282-7100

Table of Contents

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, any prospectus supplement and any documents we incorporate by reference herein or therein 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, without limitation:

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;

and 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 compliance with the listing standards of The NASDAQ Stock Market, or NASDAQ;

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, without limitation, the risk factors described in the section of this prospectus entitled Risk Factors and in the documents incorporated herein by reference. 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, except to the extent required by law.

Table of Contents

SUMMARY

This summary highlights information contained elsewhere, or incorporated by reference, in this 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 carefully, including the financial statements and the documents incorporated by reference.

Our Company

We develop, acquire and commercialize novel treatments for cancer. Our goal is to build a leading biopharmaceutical company with a diversified portfolio of proprietary oncology drugs. Our research, development, acquisition and in-licensing activities concentrate on identifying and developing new, less toxic and more effective ways to treat cancer. Our operations are primarily conducted in the United States. We are currently focusing our efforts on Pixuvri (pixantrone dimaleate), or Pixuvri, OPAXIO, brostallicin and novel bisplatinum analogues.

Corporate Information

We were incorporated in the State of Washington in 1991. Our shares of common stock trade on The NASDAQ Capital Market and the Mercato Telematico Azionario stock market in Italy, or the MTA, 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 www.celltherapeutics.com; however, the information in, or that can be accessed through, our website is not part of this prospectus.

Recent Developments

Pediatric Committee of the European Medicines Agency

In July 2009, we were notified by the European Medicines Agency, or the EMA, that Pixuvri is eligible to be submitted for a Marketing Authorization Application, or MAA, through the EMA's centralized procedure. The centralized review process provides for a single coordinated review for approval of pharmaceutical products that is conducted by the EMA on behalf of all European Union, or EU, member states. The EMA also designated Pixuvri as a New Active Substance, or NAS; if approved by the EMA, compounds designated as an NAS are eligible to receive a 10-year market exclusivity period in EU member states. In September 2009, we applied to the EMA for orphan drug designation for Pixuvri, which was granted in December 2009. In September 2009, we also submitted a Pediatric Investigation Plan, or PIP, to the EMA as part of the required filing process for approval of Pixuvri for treating relapsed, refractory aggressive NHL in Europe. In April 2010, the EMA recommended that we submit an updated PIP for Pixuvri following discussions with us about the preclinical and clinical Pixuvri data, including EXTEND, and the desire to explore the potential benefits Pixuvri may offer to children with lymphoid malignancies and solid tumors. We submitted an expanded PIP to the Pediatric Committee of the EMA, or PDCO, in July 2010. The expanded PIP was accepted for review by the PDCO in August 2010. On October 19, 2010, we announced that the PDCO had adopted an opinion agreeing to our PIP. The PDCO also recommended deferral of the initiation of the clinical studies until after Pixuvri receives EMA approval. In November 2010, the MAA seeking approval for Pixuvri for the treatment of adult patients with multiple relapsed or refractory aggressive NHL was validated and accepted for review by the EMA. Since Pixuvri was initially granted orphan drug status by the EMA for the treatment of diffuse large B-cell lymphoma (DLBCL), we agreed to withdraw the orphan designation from the EU register in November 2010 based on the expansion of the MAA to the broader aggressive NHL population.

Table of Contents

Notice from NASDAQ

On November 2, 2010, we received a notice from NASDAQ indicating that NASDAQ granted us an additional 180 days, or until May 2, 2011, to regain compliance with NASDAQ's \$1.00 minimum bid price rule under NASDAQ Marketplace Rule 5550(a)(2). Previously, on May 3, 2010, we were notified by NASDAQ that we did not meet the minimum bid price rule required for continued listing and we were provided until November 1, 2010 to achieve compliance. We may achieve compliance during the additional 180-day period if the closing bid price of our common stock is at least \$1.00 per share for a minimum of ten consecutive business days before May 2, 2011.

There can be no assurance that we will be able to comply with the minimum bid price rule prior to May 2, 2011. See **Risk Factors** **Risks Related to Our Company** Our common stock is listed on The NASDAQ Capital Market and the MTA in 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.

Recent Financing Initiatives

We have held preliminary discussions with several investment funds regarding a potential investment in our company, but we have no current agreements or commitments with respect to any investment by these investment funds or any other investors. We have substantial operating expenses associated with the development of our product candidates and we continually evaluate our financing needs and alternatives. There can be no assurance that our discussions with these investment funds or any other investors will result in an investment in our company. See **Risk Factors** **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, and additional 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.

CONSOB Investigation

On May 5, 2010, the Commissione Nazionale per le Società e la Borsa, or CONSOB, (i) notified us that it had begun the preliminary investigation for its decision on administrative proceedings relating to three asserted violations of the provisions of Section 114, paragraph 5 of the Italian Legislative Decree no. 58/98 contained in a notice that CONSOB sent to us on July 31, 2009 and (ii) provided us with a preliminary investigation report in response to our defenses that were submitted to CONSOB on August 28, 2009. On June 4, 2010 (within 30 days of May 5, 2010, the notification date of the beginning of the aforesaid preliminary investigation, according to the applicable Italian rules), we submitted further defenses that CONSOB will have to evaluate before imposing any possible administrative sanctions. On January 21, 2011, CONSOB notified us of a resolution confirming the occurrence of the three asserted violations and applying an aggregate fine of 100,000, or approximately \$136,000 as of January 21, 2011. We anticipate paying the fine according to the terms and conditions established by the applicable Italian rules and prior to the deadline of March 22, 2011 (i.e., the deadline after which default interest and/or increases in the amount of the fines will be charged).

On July 12, 2010, CONSOB (i) notified us that it had begun the preliminary investigation for its decision on administrative proceedings relating to two claimed violations of the provisions of Section 114, paragraph 1 of the Italian Legislative Decree no. 58/98, due to the asserted late disclosure of certain information reported, at CONSOB's request, in press releases disseminated on December 19, 2008 and March 23, 2009, contained in a notice that CONSOB sent to us on December 10, 2009 and (ii) provided us with a preliminary investigation report in response to our defenses which were submitted to CONSOB on January 8, 2010. On August 12, 2010 (within 30 days of July 12, 2010, the notification date of the beginning of the aforesaid preliminary investigation, according to the applicable Italian rules), we submitted further defenses that CONSOB will have to evaluate before imposing any possible administrative sanctions. Based on our assessment, the likelihood that these pecuniary administrative sanctions will be imposed on the Company is probable.

Table of Contents**Securities Class Action and Shareholder Derivative Litigation**

On March 12, 2010, a purported securities class action complaint was filed in the United States District Court for the Western District of Washington against us and certain of our officers and directors, styled *Cyril Sabbagh, individually and on behalf of all others similarly situated v. Cell Therapeutics, Inc., Dr. James A. Bianco, M.D., and Dr. Jack W. Singer* (Case No. 2:10-sv-00414), or the *Sabbagh* action. On March 19, 2010, a substantially similar class action complaint was filed in the same court, styled *Michael Laquidari, individually and on behalf of all others similarly situated v. Cell Therapeutics, Inc., Dr. James A. Bianco, M.D., and Dr. Jack W. Singer* (Case No. 2:10-cv-00480), or the *Laquidari* action. On March 31, 2010, a third substantially similar class action complaint was filed in the same court, styled *William Snyder, individually and on behalf of all others similarly situated v. Cell Therapeutics, Inc., James A. Bianco, Phillip M. Nudelman, Louis A. Bianco, John H. Bauer, Richard L. Love, Mary O. Mundinger, Jack W. Singer, Frederick W. Telling and Rodman & Renshaw, LLC* (Case No. 2:10-cv-00559), or the *Snyder* action. The securities actions are pending before Judge Marsha Pechman in the Western District of Washington. The securities complaints allege that the defendants violated the federal securities laws by making certain alleged false and misleading statements. The plaintiffs in the *Sabbagh* and *Laquidari* actions seek unspecified damages on behalf of a putative class of purchasers of our securities from May 5, 2009 through February 8, 2010. The plaintiffs in the *Snyder* action seek unspecified damages on behalf of a putative class of purchasers of our securities from May 5, 2009 through March 19, 2010, including purchasers of securities issued pursuant to or traceable to our July 22, 2009 public offering. On August 2, 2010, the court consolidated the securities actions, appointed lead plaintiffs, and approved lead plaintiffs' counsel. On September 27, 2010, lead plaintiff filed an amended consolidated complaint with a purported class period of March 25, 2008 through March 22, 2010. On October 27, 2010, the defendants filed a motion to dismiss the amended consolidated complaint. The plaintiffs filed an opposition on December 3, 2010 and the defendants filed their reply on December 22, 2010. The hearing on the motion to dismiss was held on January 28, 2011. On February 4, 2011, the court issued an order denying in large part the defendants' motion. Defendants must file an answer to the remaining claims in the amended consolidated complaint by February 18, 2011.

On April 1, 2010, a shareholder derivative complaint was filed in the United States District Court for the Western District of Washington, derivatively on our behalf against the members of our Board of Directors, styled *Shackleton v. John A. Bauer, James A. Bianco, Vartan Gregorian, Richard L. Love, Mary O. Neil Mundinger, Phillip M. Nudelman, Jack W. Singer, and Frederick W. Telling* (Case No. 2:10-cv-564). On April 5, 2010, and April 13, 2010, substantially similar derivative actions were filed in the same court, styled, respectively, *Marbury v. James A. Bianco, et al.* (Case No. 2:10-cv-00578) and *Cyrek v. John H. Bauer, et al.* (Case No. 2:10-cv-00625). The derivative actions are also pending before Judge Marsha Pechman. The derivative complaints allege that the defendants breached their fiduciary duties to the Company under Washington law by making or failing to prevent the disclosure of certain alleged false and misleading statements. The allegations in the derivative actions are substantially similar to those in the securities actions. On May 10, 2010, pursuant to the parties' stipulation, the court consolidated these three shareholder derivative actions and appointed the law firms Robbins Umeda LLP and Federman & Sherwood as co-lead counsel for derivative plaintiffs.

On June 1, 2010, a fourth related shareholder derivative action was filed in the Western District of Washington, *Souda v. John H. Bauer et al.* (Case No. 2:10-cv-00905). It was subsequently transferred to Judge Pechman and consolidated with the consolidated derivative actions. Plaintiff Souda filed a motion to reconsider the portion of the court's order dated May 10, 2010, appointing Robbins Umeda and Federman & Sherwood as co-lead derivative counsel. Souda's motion for reconsideration was denied on November 16, 2010.

Table of Contents

On July 27, 2010, a fifth related shareholder derivative action, *Bohland v. John H. Bauer et al.* (Case No. 2:10-cv-1213), was filed in the Western District of Washington and assigned to Judge John C. Coughenour. It was subsequently transferred to Judge Pechman. Plaintiff Bohland filed a motion to consolidate the Bohland action with the consolidated derivative actions and to reconsider the portion of the court's order dated May 10, 2010, appointing Robbins Umeda and Federman & Sherwood as co-lead derivative counsel. Bohland's motion for reconsideration was denied on November 16, 2010, and Bohland was ordered consolidated with the other derivative actions.

On October 4, 2010, a sixth related derivative complaint was filed in the Superior Court of Washington, County of King, *Alexander v. James A. Bianco, et al.* (Case No. 10-2-34849-2-SEA). On October 5, 2010, the complaint was removed to the Western District of Washington and assigned to Judge Pechman. On October 29, 2010, we, as the nominal defendant, filed a Notice of Related Case in the lead derivative case, *Shackleton v. John H. Bauer, et al.*, Case No. 2:10-cv-00564 (Doc. No. 42). We notified the court of this action and requested that it be consolidated with the other derivative actions per the court's May 10, 2010 Consolidation Order. On November 18, 2010, the court issued an Order to Show Cause re Consolidation in *Alexander*. On November 26, 2010, the parties agreed and the court granted consolidation of *Alexander* and ordered that all proceedings be deferred 60 days pending the outcome of the defendants' motion to dismiss. On February 4, 2011, the court lifted the stay. The lawsuits are at a preliminary stage in the proceedings. We believe that the securities class action is without merit and intend to defend it vigorously. For the shareholder derivative action, no estimate of a loss, if any, can be made at this time in the event that we do not prevail.

Value Added Tax Assessment

Our European operations are subject to a value added tax, or VAT, which is usually applied to all goods and services purchased and sold throughout Europe. The VAT receivable is \$5.3 million and \$6.3 million as of December 31, 2010 and December 31, 2009, respectively. On April 14, 2009 and December 21, 2009, the Italian Tax Authority, or the ITA, issued notices of assessment to CTI (Europe) based on the ITA's audit of CTI (Europe)'s VAT returns for the years 2003 and 2005, respectively. On June 25, 2010, the ITA issued notices of assessment to CTI (Europe) for the years 2006 and 2007 based on similar findings for the 2003 and 2005 assessments. The ITA audits concluded that CTI (Europe) did not collect and remit VAT on certain invoices issued to non-Italian clients for services performed by CTI (Europe). The assessments, including interest and penalties, for the years 2003, 2005, 2006 and 2007 are 0.5 million, 5.5 million, 2.5 million and 0.8 million, or approximately \$0.7 million, \$7.4 million, \$3.4 million and \$1.1 million as of December 31, 2010, respectively. We believe that the services invoiced were non-VAT taxable consultancy services and that the VAT returns are correct as originally filed. We are vigorously defending ourselves against the assessments both on procedural grounds and on the merits of the case. If the decision of the Provincial Tax Court of Milan, or the Tax Court, is unfavorable, then we expect to appeal to the higher courts in order to further defend our interests. However, if we are unable to successfully defend ourselves against the assessments issued by the ITA, we may be requested to pay to the ITA an amount ranging from 4.9 million to 9.4 million, or approximately \$6.6 million to \$12.6 million as of December 31, 2010, plus collection fees, notification expenses and additional interest for the period lapsed between the date in which the assessments were issued and the date of effective payment. On February 2, 2011, we paid to the ITA the required deposit in respect of the 2005 VAT in the amount of 1.5 million, or approximately \$2.0 million converted using the currency exchange rate as of December 31, 2010.

Table of Contents

2003 VAT. We have not received a notice from the ITA requesting a deposit payment for the VAT based on the 2003 assessment as of December 31, 2010. The Tax Court has scheduled the first hearing for the discussion of the merits of the case on March 18, 2011.

2005 VAT. On July 14, 2010, the ITA issued a notice requiring a deposit payment for the VAT to CTI (Europe) based on the 2005 assessment, including 50% of the assessed VAT, interest and collection fees for an amount of 1.5 million, or approximately \$2.0 million converted using the currency exchange rate as of December 31, 2010. We successfully filed a petition with the Tax Court for suspension of the 2005 notice of deposit payment. On September 28, 2010, the merits of the case for the year 2005 were discussed in a public hearing before the Tax Court. On January 13, 2011, the Tax Court issued decision no. 4/2010 in which the Tax Court (i) partially accepted our appeal and declared that no penalties can be imposed against us, (ii) confirmed the right of the Italian Tax Authorities to reassess the VAT (plus interest) in relation to the transactions identified in the 2005 notice of assessment and (iii) repealed the suspension of the notice of deposit payment. As a result of this decision, our exposure for the 2005 VAT assessment is currently reduced by the waiver of penalties of 2.6 million, or approximately \$3.5 million converted using the currency exchange rate as of December 31, 2010. The ITA has the right to appeal the decision to request for confirmation of the penalties. On February 2, 2011, we paid to the ITA the required deposit in respect of the 2005 VAT in the amount of 1.5 million, or approximately \$2.0 million converted using the currency exchange rate as of December 31, 2010, prior to the due date of February 6, 2011. We do not believe that the Tax Court has carefully reviewed all of our arguments, relevant documents and other supporting evidence that our counsel filed and presented during the hearing, including an appraisal from an independent expert, and, therefore, that there are grounds of appeal in order to ask the judges of the higher court to further consider all of our arguments in support of invalidating the entire notice of assessment. Accordingly, we will appeal to the Regional Tax Court and file a complaint with the European Commission.

While we contend that services invoiced were non-VAT taxable consulting services and that the VAT returns are correct as originally filed, we have recorded a reserve for VAT assessed, interest and collection fees totalling 2.6 million, or approximately \$3.5 million as of December 31, 2010, of which \$3.0 million is included in long-term obligations, less current portion and \$0.5 million of the reserve is accounted for as an offset to VAT receivable included in other assets.

2006 VAT. On January 10, 2011, we received a notice from the ITA requiring a deposit payment for VAT to CTI (Europe) based on the 2006 assessment, including 50% of the assessed VAT, interest and collection fees for an amount of 0.4 million, or approximately \$0.6 million converted using the currency exchange rate as of December 31, 2010, payable in the first quarter 2011. We filed a request for suspension of the collection of such amount.

2007 VAT. We have not received a notice from the ITA requesting a deposit payment for the VAT based on the 2007 assessment nor has the Tax Court scheduled a hearing as of December 31, 2010.

Recent Preferred Stock Financings

In October 2010, we entered into a privately negotiated securities purchase agreement with certain purchasers thereunder, pursuant to which we issued to the purchasers 21,000 shares of Series 7 convertible preferred stock, or Series 7 Preferred Stock, and warrants to purchase up to 22,702,704 shares of common stock for gross proceeds of \$21.0 million. The purchasers elected to convert all 21,000 shares of the Series 7 Preferred Stock and to receive the 56,756,756 shares of common stock issuable upon such conversion at the closing. The offering closed on October 22, 2010.

In January 2011, we issued 25,000 shares of Series 8 non-convertible preferred stock, or Series 8 Preferred Stock, warrants to purchase up to 22,563,177 shares of common stock and an additional investment right to purchase up to 25,000 shares of the Series 9 convertible preferred stock, or Series 9 Preferred Stock, to a single life sciences institutional investor for gross proceeds of \$25.0 million. Prior to the closing of the offering, all of the warrants to purchase 22,563,177 shares of common stock and the entire additional investment right to purchase 25,000 shares of Series 9 Preferred Stock were exercised. The investor also elected to convert the 25,000 shares of Series 9 Preferred Stock into 64,466,219 shares of common stock, for a total of 87,029,396 shares of common stock issued to the Investor as a result of the full exercises of warrants and additional

Table of Contents

investment right. The exercise price for the warrants and additional investment right was paid through the issuance by the investor to us of recourse notes fully secured with marketable securities. The offering closed on January 27, 2011. As of February 14, 2011, all 25,000 shares of the Series 8 Preferred Stock are issued and outstanding.

Table of Contents

The Securities We May Offer

We may offer shares of our common stock, shares of our preferred stock, debt securities, warrants to purchase such securities, rights to purchase such securities and units with a total value of up to \$150,000,000 from time to time pursuant to this prospectus at prices and on terms to be determined by market conditions at the time of any 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 to, update or change information contained in this prospectus or in documents we have incorporated by reference in 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, or directly to purchasers on a continuous or delayed basis. 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.

Table of Contents

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

Preferred Stock. We may issue shares of our preferred stock from time to time. The board of directors has the authority, without action by the shareholders, to designate and issue up to 10,000,000 shares of preferred stock in one or more series and to designate the rights, preferences and privileges of each series, which may be greater than the rights of the common stock.

We 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 forms 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 applicable 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 applicable 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. Forms of indentures have been filed as exhibits to the registration statement of which this prospectus forms a part, and supplemental indentures and forms of debt securities containing the terms of debt securities being offered will be incorporated by reference into the registration statement of which this prospectus forms a part from reports we file with the SEC.

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, debt securities and/or rights, 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 applicable prospectus supplements related to the series of warrants being offered, as well as the complete warrant agreements and warrant certificates that contain the terms of the warrants. Forms

Table of Contents

of warrant agreements and warrant 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 forms 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 forms a part from reports we file with the SEC.

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

The rights will be evidenced by a rights certificate issued under one or more rights agreements. In this prospectus, we have summarized certain general features of the rights. We urge you, however, to read the applicable prospectus supplements related to the series of rights being offered, as well as the complete rights agreements and rights certificates that contain the terms of the rights. Complete rights agreements and rights certificates containing the terms of rights being offered will be incorporated by reference into the registration statement of which this prospectus forms a part from reports we file with the SEC

Units. As specified in the applicable prospectus supplements, we may issue units consisting of one or more shares of common stock, shares of preferred stock, debt securities, warrants, rights or any combination of such securities.

Table of Contents

RISK FACTORS

*You should carefully consider the risks under the heading **Risk Factors** beginning on page 18 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2009, filed with the SEC on February 26, 2010, and beginning on page 30 of our Quarterly Report on Form 10-Q for the fiscal quarter ended September 30, 2010, filed with the SEC on October 28, 2010, which information is incorporated by reference in this prospectus, and the additional risks described below and other information in this prospectus and the documents incorporated by reference before deciding to invest in our securities. If any of the identified risks actually occur, they could materially adversely affect our business, financial condition, operating results or prospects and the trading price of 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 and the trading price of our securities.*

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, and additional 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 September 30, 2010, we had cash and cash equivalents of \$17.3 million. As of September 30, 2010, our total current liabilities were \$25.9 million. The aggregate principal balance related to our 7.5% and 5.75% convertible senior notes as of September 30, 2010 was \$21.2 million. We repaid the outstanding principal amount and accrued but unpaid interest on our 4% convertible senior subordinated notes in July 2010. We do not expect that our existing cash and cash equivalents, as well as proceeds received from our offerings to date, will provide sufficient working capital to fund our presently anticipated operations through the second quarter of 2011.

Raising additional capital will likely require that we issue additional shares of our common stock. Because of the number of shares reserved for issuance under various convertible securities, derivative securities and otherwise, we have a limited number of authorized shares of common stock available for issuance and it is difficult for us to obtain an increase in our authorized shares. If we do not have enough shares authorized to effect an equity financing, our ability to raise capital through equity financings may be adversely affected. 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. We have held preliminary discussions with several investment funds regarding a potential investment in our company, but we have no current agreements or commitments with respect to any investment by these investment funds or any other investors. There can be no assurance that our discussions with these investment funds or any other investors will result in an investment in our company or 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.

We may not be able to raise such capital or if we can, it may not be on favorable terms. 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. To obtain additional funding, we may need to enter into arrangements that require us to relinquish rights to certain technologies, drug candidates, products and/or potential markets. In addition, some financing alternatives may require us to meet additional regulatory requirements in Italy and the United States and we may be subject to certain contractual limitations, which may increase our costs and adversely affect our ability to obtain 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 Pixuvri, OPAXIO, brostallicin and bisplatinates, and may be forced to cease operations, liquidate our assets and possibly seek bankruptcy protection. Bankruptcy may result in the termination of agreements pursuant to which we license certain intellectual property rights, including the rights to Pixuvri, OPAXIO and brostallicin.

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 and other challenges and additional expenses.

Our common stock is traded on the MTA 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 our common stock outstanding at the beginning of that period (except for certain applicable exceptions). If we are unable to maintain a listing prospectus to cover general financing efforts under Italian law, we may be required to raise money using alternative forms of securities. For example, we may need to use convertible preferred stock and convertible debt since the common stock resulting from the conversion of such securities, subject to the provisions of European Directive No. 71/2003 and according to the interpretations of the Committee of European Securities Regulators (CESR), is not subject to the 10% limitation imposed by EU and Italian law.

Moreover, on December 23, 2008, CONSOB sent a notice to us requesting that we issue (i) immediately, a press release providing, among other things, information about our debt restructuring plan, the current state of compliance with the relevant covenants regulating our debt and the equity line of credit agreement we entered into with Midsummer Investment Ltd. on July 29, 2008, and (ii) by the end of each month and starting from the month of December 2008, a press release providing certain information relating to our management and financial situation, updated to the previous month, or the Monthly CONSOB Press Release. On July 31, 2009, CONSOB sent us a notice asserting three violations of the provisions of Section 114, paragraph 5 of the Italian Legislative Decree no. 58/98, as follows: (a) the non-disclosure without delay of the press release described under point (i) above and the subsequent incomplete disclosure of the relevant information through press releases dated January 9, 2009 and January 13, 2009; (b) the non-disclosure of the Monthly CONSOB Press Release in December 2008; and (c) the incomplete disclosure of the Monthly CONSOB Press Release in January 2009. The sanctions established by Section 193, paragraph 1 of the Italian Legislative Decree no. 58/98 for such violations are pecuniary administrative sanctions amounting to between 5,000 and 500,000, or approximately \$6,700 to \$670,000 as of December 31, 2010, applicable to each one of the three asserted violations. According to the applicable Italian legal provisions, CONSOB may impose such administrative sanctions by means of a decree stating the grounds of its decision only after evaluating our possible defenses that were submitted to CONSOB on August 28, 2009 (within 30 days of July 31, 2009, the notification date of the relevant charges, according to the applicable Italian rules). On May 5, 2010, CONSOB (1) notified us that it had begun the preliminary investigation for its decision on these administrative proceedings and (2) provided us with a preliminary investigation report in response to our defenses submitted on August 28, 2009. On June 4, 2010 (within 30 days of May 5, 2010, the notification date of the beginning of the aforesaid preliminary investigation, according to the applicable Italian rules), we submitted further defenses that CONSOB will have to evaluate before imposing any possible administrative sanctions. On January 21, 2011, CONSOB notified us of a

Table of Contents

resolution confirming the occurrence of the three asserted violations and applying a fine for each of them in the following amounts: 20,000 for sanction (a) above; 50,000 for sanction (b) above; and 30,000 for sanction (c) above; for an aggregate fine of 100,000, or approximately \$136,000 as of January 21, 2011, for these sanctions. We anticipate paying the fine according to the terms and conditions established by the applicable Italian rules and prior to the deadline of March 22, 2011 (i.e., the deadline after which default interest and/or increases in the amount of the fines will be charged).

Separately, on December 10, 2009, CONSOB sent us a notice claiming two violations of the provisions of Section 114, paragraph 1 of the Italian Legislative Decree no. 58/98 due to the asserted late disclosure of certain information then reported, at CONSOB's request, in press releases disseminated on December 19, 2008 and March 23, 2009. Such information concerned, respectively: (i) the conversion by BAM Opportunity Fund LP of 9.66% notes into shares of common stock that occurred between October 24, 2008 and November 19, 2008; and (ii) the contents of the opinion expressed by Stonefield Josephson, Inc., an independent registered public accounting firm, with respect to our 2008 financial statements. The sanctions established by Section 193, paragraph 1 of the Italian Legislative Decree no. 58/98 for such violations are pecuniary administrative sanctions amounting to between 5,000 and 500,000, or approximately \$6,700 to \$670,000 as of December 31, 2010, applicable to each of the two asserted violations. According to the applicable Italian legal provisions, CONSOB may impose such administrative sanctions by means of a decree stating the grounds of its decision only after evaluating our possible defenses that were submitted to CONSOB on January 8, 2010 (within 30 days of December 10, 2009, the notification date of the relevant charges, according to the applicable Italian rules). On July 12, 2010, CONSOB (a) notified us that it had begun the preliminary investigation for its decision on these administrative proceedings and (b) provided us with a preliminary investigation report in response to our defenses submitted on January 8, 2010. On August 12, 2010 (within 30 days of July 12, 2010, the notification date of the beginning of the aforesaid preliminary investigation, according to the applicable Italian rules), we submitted further defenses that CONSOB will have to evaluate before imposing any possible administrative sanctions. Based on our assessment, the likelihood that these pecuniary administrative sanctions will be imposed on the Company is probable.

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

Our European operations are subject to a VAT which is usually applied to all goods and services purchased and sold throughout Europe. The VAT receivable is \$5.3 million and \$6.3 million as of December 31, 2010 and December 31, 2009, respectively. On April 14, 2009 and December 21, 2009, the Italian Tax Authority, or the ITA, issued notices of assessment to CTI (Europe) based on the ITA's audit of CTI (Europe)'s VAT returns for the years 2003 and 2005, respectively. On June 25, 2010, the ITA issued notices of assessment to CTI (Europe) for the years 2006 and 2007 based on similar findings for the 2003 and 2005 assessments. The ITA audits concluded that CTI (Europe) did not collect and remit VAT on certain invoices issued to non-Italian clients for services performed by CTI (Europe). The assessments, including interest and penalties, for the years 2003, 2005, 2006 and 2007 are 0.5 million, 5.5 million, 2.5 million and 0.8 million, or approximately \$0.7 million, \$7.4 million, \$3.4 million and \$1.1 million as of December 31, 2010, respectively. We believe that the services invoiced were non-VAT taxable consultancy services and that the VAT returns are correct as originally filed. We are vigorously defending ourselves against the assessments both on procedural grounds and on the merits of the case. If the decision of the Provincial Tax Court of Milan, or the Tax Court, is unfavorable, then we expect to appeal to the higher courts in order to further defend our interests. However, if we are unable to successfully defend ourselves against the assessments issued by the ITA, we may be requested to pay to the ITA an amount ranging from 4.9 million to 9.4 million, or approximately \$6.6 million to \$12.6 million as of December 31, 2010, plus collection fees, notification expenses and additional interest for the period lapsed between the date in which the assessments were issued and the date of effective payment. On February 2, 2011, we paid to the ITA the required deposit in respect of the 2005 VAT in the amount of 1.5 million, or approximately \$2.0 million converted using the currency exchange rate as of December 31, 2010.

Table of Contents

2003 VAT. We have not received a notice from the ITA requesting a deposit payment for the VAT based on the 2003 assessment as of December 31, 2010. The Tax Court has scheduled the first hearing for the discussion of the merits of the case on March 18, 2011.

2005 VAT. On July 14, 2010, the ITA issued a notice requiring a deposit payment for the VAT to CTI (Europe) based on the 2005 assessment, including 50% of the assessed VAT, interest and collection fees for an amount of 1.5 million, or approximately \$2.0 million converted using the currency exchange rate as of December 31, 2010. We successfully filed a petition with the Tax Court for suspension of the 2005 notice of deposit payment. On September 28, 2010, the merits of the case for the year 2005 were discussed in a public hearing before the Tax Court. On January 13, 2011, the Tax Court issued decision no. 4/2010 in which the Tax Court (i) partially accepted our appeal and declared that no penalties can be imposed against us, (ii) confirmed the right of the Italian Tax Authorities to reassess the VAT (plus interest) in relation to the transactions identified in the 2005 notice of assessment and (iii) repealed the suspension of the notice of deposit payment. As a result of this decision, our exposure for 2005 VAT assessment is currently reduced by the waiver of penalties of 2.6 million, or approximately \$3.5 million converted using the currency exchange rate as of December 31, 2010. The ITA has the right to appeal the decision to request for confirmation of the penalties. On February 2, 2011, we paid to the ITA the required deposit in respect of the 2005 VAT in the amount of 1.5 million, or approximately \$2.0 million converted using the currency exchange rate as of December 31, 2010, prior to the due date of February 6, 2011. We do not believe that the Tax Court has carefully reviewed all of our arguments, relevant documents and other supporting evidence that our counsel filed and presented during the hearing, including an appraisal from an independent expert, and, therefore, that there are grounds of appeal in order to ask the judges of the higher court to further consider all of our arguments in support of invalidating the entire notice of assessment. Accordingly, we will appeal to the Regional Tax Court and file a complaint with the European Commission.

While we contend that services invoiced were non-VAT taxable consulting services and that the VAT returns are correct as originally filed, we have recorded a reserve for VAT assessed, interest and collection fees totalling 2.6 million, or approximately \$3.5 million as of December 31, 2010, of which \$3.0 million is included in long-term obligations, less current portion and \$0.5 million of the reserve is accounted for as an offset to VAT receivable included in other assets.

2006 VAT. On January 10, 2011, we received a notice from the ITA requiring a deposit payment for VAT to CTI (Europe) based on the 2006 assessment, including 50% of the assessed VAT, interest and collection fees for an amount of 0.4 million, or approximately \$0.6 million converted using the currency exchange rate as of December 31, 2010, payable in the first quarter 2011. We filed a request for suspension of the collection of such amount.

2007 VAT. We have not received a notice from the ITA requesting a deposit payment for the VAT based on the 2007 assessment nor has the Tax Court scheduled a hearing as of December 31, 2010.

If there is an adverse outcome in the securities class action and shareholder derivative litigation that have been filed against us, our business may be harmed.

We and certain of our officers and directors are named as defendants in purported securities class actions and shareholder derivative lawsuits filed in the U.S. District Court for the Western District of Washington. These securities class action lawsuits are brought on behalf of a putative class of purchasers of our securities from March 25, 2008 through March 22, 2010, and seek unspecified damages. All of the purported securities class actions have been consolidated into one securities class action, a lead plaintiff has been appointed, and a consolidated amended complaint has been filed. The defendants filed a motion to dismiss the consolidated amended complaint on October 27, 2010. Plaintiffs filed their opposition to the motion on December 3, 2010, and the defendants filed their reply on December 22, 2010. The motion was heard on January 28, 2011. On February 4, 2011, the court issued an order denying in large part the defendants' motion. Defendants must file an answer to the remaining claims in the amended consolidated complaint by February 18, 2011. The currently filed shareholder derivative lawsuits have also been consolidated into one derivative action and co-lead plaintiffs have been appointed. The court ordered the derivative action stayed pending the outcome of the defendants' motion to dismiss in the securities class action. On February 4, 2011, the court lifted the stay. As with any litigation proceeding, we cannot predict with certainty the eventual outcome of pending litigation. Furthermore, we may have to incur substantial expenses in connection with these lawsuits. In the event of an adverse outcome, our business could be materially harmed.

Table of Contents

Our common stock is listed on The NASDAQ Capital Market and the MTA 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 \$35.0 million. NASDAQ's 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 NASDAQ Marketplace Rules. On January 23, 2009, we received an Additional Staff Determination Letter from NASDAQ that stated that NASDAQ staff had concluded that we had violated NASDAQ Marketplace Rule 4350(i)(1)(C) (now NASDAQ 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. On March 6, 2009, we were notified by NASDAQ that the Panel had determined to continue the listing of our common stock on The NASDAQ Capital Market, subject to the condition that, on or before April 6, 2009, we demonstrated compliance with all applicable standards for continued listing on The NASDAQ Capital Market, including the \$35.0 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 determined to continue the listing of our common stock on The NASDAQ Capital Market.

NASDAQ reinstated the \$1.00 minimum bid price requirement on August 3, 2009. On May 3, 2010, we received notice from NASDAQ indicating that for the last 30 consecutive business days the closing bid price of our common stock was below the minimum \$1.00 per share requirement for continued listing of our common stock on The NASDAQ Capital Market under NASDAQ Marketplace Rule 5550(a)(2). This notification has no immediate effect on the listing of or the ability to trade our common stock on The NASDAQ Capital Market. In accordance with NASDAQ Marketplace Rule 5810(c)(3)(A), we were provided a grace period of 180 calendar days, or until November 1, 2010, to regain compliance. We would have achieved compliance if the bid price of our common stock closed at \$1.00 per share or more for a minimum of ten consecutive trading days before November 1, 2010. Alternatively, we were eligible for an additional 180-day grace period if we met all of the initial listing standards of NASDAQ, with the exception of the closing bid price. On November 2, 2010, we received notice from NASDAQ that it granted us an additional 180 days, or until May 2, 2011, to regain compliance with the minimum \$1.00 per share requirement for continued listing of our common stock on The NASDAQ Capital Market under NASDAQ Marketplace Rule 5550(a)(2). We may achieve compliance during the additional 180-day period if the closing bid price of our common stock is at least \$1.00 per share for a minimum of ten consecutive trading days before May 2, 2011.

There can be no assurance that our closing bid price will achieve \$1.00 per share or more for the applicable period. If we are unable to attain compliance with the minimum bid price, whether by effecting a reverse stock split of our common stock or otherwise, we may be delisted. In addition, if we fail to maintain the minimum value of listed securities, we may be delisted. In the event that we receive a delisting determination from NASDAQ, we may request a hearing before the Panel. Following the hearing request, our common stock would continue to be listed on The NASDAQ Capital Market pending the conclusion of the hearing process and during any extension period which may be granted by the Panel. There can be no assurance that the Panel would delay an unfavorable delisting decision or grant any extension period.

Table of Contents

The level of trading activity of our common stock may decline if it is no longer listed on The NASDAQ Capital Market. Furthermore, our failure to maintain a listing on The NASDAQ Capital Market may constitute an event of default under certain of our indebtedness which would accelerate the maturity date of such debt. As such, if our common stock ceases to be listed for trading on The NASDAQ Capital Market for any reason, it may harm our stock price, increase the volatility of our stock price and make it more difficult for investors to sell shares of our common stock. In the event our common stock is delisted from The NASDAQ Capital Market, 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 Capital Market 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 determine 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 also 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, the Borsa Italiana, and NASDAQ lifted the trading halts on our common stock. In addition, on March 23, 2009, the Borsa Italiana halted trading of our common stock on the MTA and resumed trading prior to the 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. 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 condition at any time, and there can be no guarantee that the Borsa Italiana, 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 Capital Market or the MTA, or both, for any reason, or if trading in our stock is halted or suspended on The NASDAQ Capital Market or the MTA, or both, such events may harm the trading price of our securities, increase the volatility of the trading price of our securities 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 Capital Market or if trading in our stock is halted or suspended on The NASDAQ Capital Market, we may become subject to certain obligations. In addition, if we are not listed on The NASDAQ Capital 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 harm our ability to raise the capital we need.

If we make any acquisitions, we will incur a variety of costs and may never realize the anticipated benefits.

If appropriate opportunities become available, we may attempt to acquire businesses and assets that we believe are a strategic fit with our business. We currently have no agreements to consummate any material acquisitions. If we pursue any such transaction, the process of negotiating the acquisition and integrating an acquired business and assets may result in operating difficulties and expenditures and may require significant management attention that would otherwise be available for ongoing development of our business, whether or not any such transaction is ever consummated. Moreover, we may never realize the anticipated benefits of any acquisition. Future acquisitions could result in potentially dilutive issuances of equity securities, the incurrence of debt, contingent liabilities and/or amortization expenses related to goodwill and other intangible assets, which could harm our business, financial condition, operating results and prospects and the trading price of our securities.

Table of Contents

**RATIO OF EARNINGS TO FIXED CHARGES AND OF EARNINGS TO COMBINED FIXED
CHARGES AND PREFERRED STOCK DIVIDENDS**

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

	Nine months ended September 30, 2010	Year ended December 31,				
		2009	2008	2007	2006	2005
Ratio of earnings to fixed charges (1)						
Ratio of earnings to combined fixed charges and preferred stock dividends (1)						

- (1) Earnings were not sufficient to cover fixed charges or combined fixed charges and preferred stock dividends for each of the periods indicated. 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 nine months ended September 30, 2010 and for the years ended December 31, 2009, 2008, 2007, 2006 and 2005, were insufficient to cover fixed charges, and fixed charges and preferred stock dividends, by \$113.4, \$116.8, \$202.9, \$148.3, \$135.8 and \$102.5 (in millions), respectively. For this reason, no ratios are provided for these periods.

USE OF PROCEEDS

We intend to use the net proceeds from the sale of any of our securities for general corporate purposes, unless we state otherwise in a prospectus supplement. We may temporarily invest funds that we do not immediately use in short- and medium-term marketable securities.

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, contractual restrictions and other factors that our board of directors may deem relevant.

Our outstanding shares of Series 8 Preferred Stock are entitled to annual dividends at a rate of 10% per annum from the date of issuance, payable in the form of additional shares of Series 8 Preferred Stock. See [Description of Capital Stock](#) [General Description of Preferred Stock](#) [Series 8 Preferred Stock](#).

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, as amended, our amended and restated bylaws and all applicable provisions of Washington law.

General

We are authorized to issue 1,200,000,000 shares of common stock, no par value, and 10,000,000 shares of preferred stock, no par value. As of February 14, 2011, there were 900,799,566 shares of common stock outstanding, warrants to purchase approximately 91,183,529 shares of common stock outstanding and 25,000 shares of our Series 8 Preferred Stock outstanding.

On April 15, 2007, we effected a 1-for-4 reverse stock split of our common stock and on August 31, 2008, we effected a 1-for-10 reverse stock 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 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

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 the common stock. It is not possible to state the actual effects of the issuance of any shares of preferred stock upon the rights of holders of the common stock until our board of directors determines the specific rights of the holders of this preferred stock. However, the effects might include, among other things:

restricting dividends on the common stock;

diluting the voting power of the common stock;

impairing the liquidation rights of the common stock; or

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

Series 8 Preferred Stock

As of February 14, 2011, there were 25,000 shares of our Series 8 Preferred Stock outstanding. The Series 8 Preferred Stock is entitled to annual dividends at a rate of 10% per annum from the date of issuance,

Table of Contents

payable in the form of additional shares of Series 8 Preferred Stock. Each share of Series 8 Preferred Stock is entitled to a liquidation preference equal to the initial stated value of \$1,000 per share of Series 8 Preferred Stock, plus any accrued and unpaid dividends, before any distribution of assets may be made to holders of capital stock ranking junior to the Series 8 Preferred Stock. The Series 8 Preferred Stock is not convertible into common stock but is redeemable, at our option, at any time after issuance, either in cash or by offset against recourse notes fully secured with marketable securities. The Series 8 Preferred Stock has no voting rights except as otherwise expressly provided in the articles of amendment to our amended and restated articles of incorporation or as otherwise required by law. However, so long as at least 8,000 or more originally issued shares of Series 8 Preferred Stock are outstanding, we cannot amend our amended and restated articles of incorporation, amended and restated bylaws or other charter documents so as to materially, specifically and adversely affect the rights of the Series 8 Preferred Stock or authorize or create any class of senior preferred stock, in each case without the affirmative written consent of holders of a majority of the outstanding shares of Series 8 Preferred Stock.

Anti-Takeover Effects of Provisions of Washington Law, Our Charter and Bylaws and Our Rights Plan

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 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 at a shareholders meeting by holders of not less than 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 our 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.

In connection with our rights plan, one preferred stock purchase right was distributed for each common share held as of the close of business on January 7, 2010. Initially, the rights are not exercisable and are attached to, and trade with, all of the shares of our common stock outstanding as of, and issued subsequent

Table of Contents

to, the record date. Each right, if and when it becomes exercisable, will entitle the holder to purchase one ten-thousandth of a share of a new series of junior participating cumulative preferred stock for \$6.00, subject to standard adjustment in the rights plan. The rights will become exercisable for our preferred stock if a person or group acquires 20% or more of our common stock. Upon acquisition of 20% or more of our common stock, the board of directors could decide that each right (except those held by a 20% shareholder, which become null and void) would become exercisable, entitling the holder to receive upon exercise, in lieu of a number of units of preferred stock, that number of shares of our common stock having a market value of two times the exercise price of the right. In certain circumstances, including if there are insufficient shares of our common stock to permit the exercise in full of the rights, the holder may receive units of preferred stock, other securities, cash or property or any combination of the foregoing.

If we are acquired in a merger or other business combination transaction after any such event, each holder of a right, except those held by a 20% shareholder, which become null and void, would then have the right to receive, upon exercise, common stock of the acquiring company having a market value equal to two times the exercise price of the right.

Our board of directors may redeem the rights for \$0.0001 per right or terminate the rights plan at any time prior to an acquisition by a person or group holding 20% or more of our common stock. The rights plan will expire on January 7, 2013.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Computershare Trust Company, N.A.

Table of Contents

DESCRIPTION OF DEBT SECURITIES

This summary, 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.

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

General

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

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 depository 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 U.S. federal income tax purposes, and whether we can redeem the debt securities if we have to pay such additional amounts;

Table of Contents

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;

whether or not the debt securities will be senior or subordinated, and the terms of the subordination of any series of subordinated debt;

the place where payments will be payable;

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

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

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

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

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

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

incur additional indebtedness;

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 shareholders and affiliates;

issue or sell stock of our subsidiaries; or

effect a consolidation or merger;

Table of Contents

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

Consolidation, Merger or Sale

The indentures 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 validly extended;

Table of Contents

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 validly extended;

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

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

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

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

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

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

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

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

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

Table of Contents

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, without limitation:

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 SEC 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 in addition to or in place of certificated 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, authentication and delivery of debt securities of any series;

to provide for the issuance of and establish the form and terms and conditions of the debt securities of any series authorized pursuant to the indentures, to establish the form of any certifications required to be furnished pursuant to the indentures or any series or to add to the rights of the holders of any series of debt securities;

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

to change anything that does not 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 debt securities of any series 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 debt securities of any series;

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

Table of Contents

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

Discharge

The indentures provide 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 mutilated, destroyed, lost or stolen 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 of 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, New York, New York, known as DTC, or another depository named by us and identified in a prospectus supplement with respect to that series.

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 supplements, 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 not impose a service charge for any registration of transfer or exchange, but we may require payment of any taxes or other governmental charges applicable to or associated with such registration of transfer or exchange.

We will name in the applicable prospectus supplements 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:

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

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

Table of Contents

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 certain 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 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. Additional or different subordination provisions may be described in a prospectus supplement relating to a particular series of debt securities.

Table of Contents

DESCRIPTION OF WARRANTS

This summary, 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, debt securities and/or rights 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 pursuant to this prospectus as exhibits to the registration statement of which this prospectus forms 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 of 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 pursuant to this prospectus, as well as the complete warrant agreements that contain the terms of the warrants.

General

We will describe in the applicable prospectus supplements 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;

Table of Contents

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

U.S. federal income tax consequences of holding or exercising the warrants;

whether the warrants are issued pursuant to a warrant agreement with a warrant agent or issued directly by us; and

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

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

If warrants for the purchase of our common stock or preferred stock are offered, the prospectus supplements 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;

whether the warrants are issued pursuant to a warrant agreement with a warrant agent or issued directly by us; 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.

Edgar Filing: CELL THERAPEUTICS INC - Form 424B5

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

Table of Contents

or interest on the underlying debt securities or to enforce covenants in the applicable indenture. Until any warrants to purchase common stock or preferred stock are exercised, holders of the warrants will not have any rights of holders of the underlying common stock or preferred stock, 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 or preferred stock, as the case may be, at the exercise price described in the applicable prospectus supplements. After the close of business on the day when the right to exercise terminates (or a later date if we extend the time for exercise), unexercised warrants will become void.

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

delivering to us or to the warrant agent the payment required by the applicable prospectus supplements to purchase the underlying security;

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

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

If the holder complies with the procedures described above, the warrants will be considered to have been exercised when we receive or the warrant agent receives, as applicable, 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 the holder has completed those procedures and subject to the foregoing, we will, as soon as practicable, issue and deliver to such holder the debt securities, common stock or preferred stock that such holder purchased upon exercise. If the holder exercises fewer than all of the warrants represented by a warrant certificate, a new warrant certificate will be issued to such holder 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, correct or supplement 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 materially adversely affect the interests of the holders of the warrants.

Warrant Adjustments

Unless the applicable prospectus supplements state 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 supplements state otherwise, if we, without payment therefor:

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

Table of Contents

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

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

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

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

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

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

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

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

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

Table of Contents

DESCRIPTION OF RIGHTS

This summary, together with the additional information we include in any applicable prospectus supplements, summarizes the material terms and provisions of the rights that we may offer under this prospectus, which consist of rights to purchase our common stock, preferred stock and/or debt securities in one or more series. Rights may be offered independently or together with our common stock, preferred stock, debt securities and/or warrants 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 rights we may offer pursuant to this prospectus, we will describe the particular terms of any rights that we may offer in more detail in the applicable prospectus supplements. The terms of any rights we offer under a prospectus supplement may differ from the terms we describe below.

The applicable prospectus supplements relating to any rights that we offer will include specific terms of any offering of rights for which this prospectus is being delivered, including the following, to the extent applicable:

the price, if any, per right;

the exercise price payable for each share of common stock, share of preferred stock or debt security upon the exercise of the rights;

the number of rights issued or to be issued to each holder;

the number and terms of the shares of common stock, shares of preferred stock or debt securities that may be purchased per each right;

the extent to which the rights are transferable;

any other terms of the rights, including the terms, procedures and limitations relating to the exchange and exercise of the rights;

the respective dates on which the holder's ability to exercise the rights will commence and will expire;

the extent to which the rights may include an over-subscription privilege with respect to unsubscribed securities; and

if applicable, the material terms of any standby underwriting or purchase arrangement entered into by us in connection with the offering of such rights.

The description in the applicable prospectus supplements of any rights that we may offer will not necessarily be complete and will be qualified in its entirety by reference to the applicable rights agreement and/or rights certificate, which will be filed with the SEC in connection therewith.

DESCRIPTION OF UNITS

As specified in the applicable prospectus supplement, we may issue units consisting of one or more shares of common stock, shares of preferred stock, debt securities, warrants, rights or any combination of such securities.

Table of Contents

LEGAL OWNERSHIP OF SECURITIES

We can issue securities in registered form or in the form of one or more global securities. We describe global securities in greater detail below. We refer to those persons who have securities registered in their own names on the books that we or any applicable trustee or depository 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 supplements. This means securities may be represented by one or more global securities registered in the name of a financial institution that holds them as depository on behalf of other financial institutions that participate in the depository'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 depository. Consequently, for global securities, we will recognize only the depository as the holder of the securities, and we will make all payments on the securities to the depository. The depository 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 depository 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 depository's book-entry system or holds an interest through a participant. As long as the securities are issued in global form, investors will be indirect holders, and not holders, of the securities.

Street Name Holders

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

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

Table of Contents

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 depositary's rules and procedures will affect these matters.

Global Securities

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

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

A global security may not be transferred to or registered in the name of anyone other than the depositary, its nominee or a successor depositary, unless special termination situations arise. We describe those situations below under "Special Situations When a Global Security Will Be Terminated." As a result of these arrangements, the depositary, or its nominee, will be the sole registered owner and holder of all securities represented by a global security, and investors will be permitted to own only beneficial interests in a global

Table of Contents

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 supplements for a particular security indicate 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; and 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; and we do not monitor and are not responsible for the actions of any of those intermediaries.

Table of Contents

Special Situations When a Global Security Will Be Terminated

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

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

if the depository notifies us that it is unwilling, unable or no longer qualified to continue as depository for that global security and we do not appoint another institution to act as depository 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 depository for the discontinuance of securities in global form.

The applicable prospectus supplements may also list additional situations for terminating a global security that would apply only to the particular series of securities covered by the prospectus supplements. When a global security terminates, the depository, 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 offered pursuant to this prospectus and any accompanying prospectus supplements:

to or through one or more underwriters or dealers;

to investors directly;

through agents; or

through any combination of these methods of sale.

Our securities may be offered and sold:

at a fixed price or prices, which may be changed;

at market prices prevailing at the time of sale;

at prices related to the prevailing market prices; or

at negotiated prices.

Any of the prices at which we sell securities may be at a discount to market prices. Broker-dealers may also receive from us, as applicable, or the purchasers of the securities compensation that is not expected to exceed that customary in the types of transactions involved.

Each prospectus supplement, to the extent applicable, will describe the number and terms of the securities to which such prospectus supplement relates, including:

any over-allotment options under which underwriters, if any, may purchase additional securities;

the name or names of any underwriters or agents with whom we have entered into an arrangement with respect to the sale of such securities;

the public offering or purchase price of such securities;

any underwriting discounts or commissions or agency fees or other items constituting underwriter or agent compensation;

any discounts, commissions or concessions allowed or reallocated or paid to dealers;

any securities exchanges or markets on which the securities may be listed; and

the net proceeds we will receive from such sale.

Underwritten Offerings

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. Underwriters may sell the securities to or through dealers, and such

Table of Contents

dealers may receive compensation in the form of discounts. 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 any such underwriters in the applicable prospectus supplement, naming the underwriter and the nature of any such relationship.

Direct Sales and Sales through Agents

We may sell securities directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act with respect to any sale of those securities. We also may, from time to time, authorize dealers or agents to offer and sell these securities, upon such terms and conditions as may be set forth in the applicable prospectus supplement, if applicable. In order to comply with the securities laws of certain states, if applicable, the securities offered will be sold in such jurisdictions only through registered or licensed brokers or dealers. In addition, in certain states securities may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with. This prospectus, one or more prospectus supplements, and the registration statement of which this prospectus forms a part may be used in conjunction with one or more other registration statements to the extent permitted by the Act and the rules and regulations promulgated thereunder.

Rights Offerings

We also may sell directly to investors through subscription rights distributed to our shareholders on a pro rata basis. In connection with any distribution of subscription rights to shareholders, if all of the underlying securities are not subscribed for, we may sell the unsubscribed shares of our securities 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.

We may also sell securities in one or more of the following transactions:

block transactions (which may involve crosses) in which a broker-dealer may sell all or a portion of the shares as agent but may position and resell all or a portion of the block as principal to facilitate the transaction;

purchases by a broker-dealer as principal and resale by the broker-dealer for its own account;

ordinary brokerage transactions and transactions in which a broker-dealer solicits purchasers;

sales at the market to or through a market maker or into an existing trading market, on an exchange or otherwise, for securities; and

sales in other ways not involving a market maker or established trading markets, including direct sales to purchasers.

We may also enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. In connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by us or borrowed from us or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from us in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and will be identified in the applicable prospectus supplement or in a post-effective amendment to the registration statement of which this prospectus forms a part.

Table of Contents

Any dealers or agents that participate in the distribution of securities may be deemed to be underwriters under the Securities Act, and in such event, any discounts or commissions received by them and any profit realized by them on the resale of securities they realize may be deemed to be underwriting discounts and commissions under the Securities Act.

Indemnification

Underwriters, dealers and agents and remarketing firms may be entitled, under agreements entered into with us, to indemnification against and contribution toward certain civil liabilities, including liabilities under the Securities Act, or to contribute with respect to payments that the agents, dealers, underwriters or remarketing firms may be required to make.

Stabilization

In connection with any offering of the securities hereby, certain underwriters and selling group members and their respective affiliates may engage in transactions that stabilize, maintain or otherwise affect the market price of the applicable securities. These transactions may include stabilization transactions pursuant to which these persons may bid for or purchase securities for the purpose of stabilizing their market price.

The underwriters in an offering of securities may also create a short position for their account by selling more securities in connection with the offering than they are committed to purchase from us. In that case, the underwriters could cover all or a portion of the short position by either purchasing securities in the open market following completion of the offering of these securities or by exercising any over-allotment option granted to them by us. In addition, the managing underwriter may impose penalty bids under contractual arrangements with other underwriters, which means that it can reclaim from an underwriter (or any selling group member participating in the offering) for the account of the other underwriters, the selling concession for the securities that are distributed in the offering but subsequently purchased for the account of the underwriters in the open market. Any of the transactions described in this paragraph or comparable transactions that are described in any accompanying prospectus supplement may result in the maintenance of the price of the securities at a level above that which might otherwise prevail in the open market. None of the transactions described in this paragraph or in an accompanying prospectus supplement are required to be taken by an underwriter and, if they are undertaken, may be discontinued at any time.

Under applicable rules and regulations under the Exchange Act, under certain circumstances a person engaged in the distribution of the securities offered under this prospectus and the accompanying prospectus supplement may not simultaneously engage in market making activities with respect to our securities for a specified period prior to the commencement of such distribution.

Passive Market-Making on NASDAQ

Any underwriters who are qualified market makers on The NASDAQ Capital Market may engage in passive market making transactions in our common stock on The NASDAQ Capital Market in accordance with Rule 103 of Regulation M. 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 making bid, however, the passive market making bid must then be lowered when certain purchase limits are exceeded.

Remarketing Arrangements

Offered securities may also be offered and sold in connection with a remarketing upon their purchase, in accordance with a redemption or repayment pursuant to their terms, or otherwise, by one or more remarketing firms, acting as principals for their own accounts or as agents for us. We will identify any remarketing firm and describe the terms of its agreements, if any, with us and its compensation in the applicable prospectus supplement.

Table of Contents

Delayed Delivery Contracts

If indicated in the applicable prospectus supplement, we will authorize dealers acting as our agents to solicit offers by institutions to purchase securities covered by this prospectus from us at the public offering price set forth in the relevant prospectus supplement under delayed delivery contracts providing for payment and delivery on the date or dates stated in the relevant prospectus supplement. Each delayed delivery contract will be for an amount not less than, and the aggregate principal amount of securities sold pursuant to delayed delivery contracts shall be not less nor more than, the respective amounts stated in the applicable prospectus supplement. Institutions with whom delayed delivery contracts, when authorized, may be made include commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions, and other institutions, but will in all cases be subject to our approval. Delayed delivery contracts will not be subject to any conditions except (i) the purchase by an institution of the securities covered by its delayed delivery contracts may not at the time of delivery be prohibited under the laws of any jurisdiction in the United States to which the institution is subject, and (ii) if the securities are being sold to underwriters, we will be required to have sold to such underwriters the total principal amount of the securities less the principal amount thereof covered by delayed delivery contracts. The underwriters and any other agents will not have any responsibility in respect of the validity or performance of delayed delivery contracts.

Other Relationships

Underwriters, dealers, agents and remarketing firms may engage in transactions with, or perform services for, us and our affiliates in the ordinary course of business. Unless we specify otherwise in the related prospectus supplement, each class or series of securities will be a new issue with no established trading market, other than shares of our common stock, which are listed on The NASDAQ Capital Market. It is possible that one or more underwriters may make a market in our securities, but will not be obligated to do so and may discontinue any market making at any time without notice. Therefore, no assurance can be given as to the liquidity of the trading market for our securities.

Table of Contents

LEGAL MATTERS

Certain legal matters in connection with the securities offered hereby will be passed upon for us by O Melveny & Myers 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, 2009, and for each of the three years in the period ended December 31, 2009, included in our Annual Report on Form 10-K for the year ended December 31, 2009, as set forth in its report, which is incorporated by reference in this prospectus and elsewhere in the registration statement of which this prospectus forms a part. 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.