

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Proposed maximum aggregate offering price	Amount of registration fee ⁽¹⁾⁽²⁾
Series 6 Preferred Stock, no par value per share, and underlying shares of common stock, no par value	\$4,060,000	\$289.48

- (1) Calculated in accordance with Rule 457(r) under the Securities Act of 1933, as amended, or the Securities Act.
- (2) This “Calculation of Registration Fee” table shall be deemed to update the “Calculation of Registration Fee” table in the registrant’s registration statement on Form S-3 (File No. 333-161442) in accordance with Rules 456(b) and 457(r) under the Securities Act.

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PROSPECTUS SUPPLEMENT
(to Prospectus dated August 19, 2009)



Making cancer more treatable™

CELL THERAPEUTICS, INC.
4,060 Shares of Series 6 Preferred Stock
and the 11,600,000 Shares of Common Stock
Issuable upon Conversion Thereof

This prospectus supplement relates to the offer and sale from time to time of 4,060 shares of our Series 6 Preferred Stock, or the Series 6 Preferred Stock, and the 11,600,000 shares of our common stock issuable from time to time upon conversion of the Series 6 Preferred Stock by the selling shareholder identified in this prospectus supplement.

For a more detailed description of the Series 6 Preferred Stock offered hereby, see the section entitled “Description of Series 6 Preferred Stock” beginning on page S-19 of this prospectus supplement. For a more detailed description of our common stock issuable upon the conversion of the Series 6 Preferred Stock offered hereby, see the section entitled “Description of Capital Stock” beginning on page S-21 of this prospectus supplement.

We will receive no proceeds from any sale by the selling shareholder of the shares of Series 6 Preferred Stock or common stock covered by this prospectus.

The selling shareholder may offer the shares from time to time directly or through underwriters, broker-dealers or agents and in one or more public or private transactions at market prices prevailing at the time of sale, at fixed prices, at negotiated prices, at various prices determined at the time of sale or at prices related to prevailing market prices. If the shares are sold through underwriters, broker-dealers or agents, the selling shareholder or purchasers of the shares will be responsible for underwriting discounts or commissions or agents’ commissions. The timing and amount of any sale is within the selling shareholder’s sole discretion, subject to certain restrictions.

The Series 6 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 July 26, 2010, the last reported sale price of our common stock on The NASDAQ Capital Market was \$0.40.

Investing in the Series 6 Preferred Stock and the common stock involves a high degree of risk. See the section entitled “[Risk Factors](#)” beginning on page S-6 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 July 27, 2010.

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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.

Neither the Series 6 Preferred Stock nor the shares of common stock issuable from time to time upon conversion of the Series 6 Preferred Stock covered by this prospectus supplement are being offered 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.

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 6 Preferred Stock and the shares of common stock issuable from time to time upon conversion of the Series 6 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 their respective dates, regardless of the time of delivery of this prospectus supplement and the accompanying prospectus, or of any sale of the Series 6 Preferred Stock or the common stock issuable upon conversion of the Series 6 Preferred Stock. You should read this prospectus supplement and the accompanying prospectus 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 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” into 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 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, 2009;
- our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2010;
- our Current Reports on Form 8-K filed on January 19, 2010 (Items 1.01, 3.03, 5.03 and 9.01 (excluding exhibit 99.1) only), February 9, 2010 (Item 8.01 only), February 22, 2010, March 3, 2010 (Item 8.01 only), March 5, 2010, March 22, 2010 (Item 8.01 only), April 5, 2010 (Items 1.01, 3.03, 5.03 and 9.01 (excluding exhibit 99.1) only), 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 (Items 1.01, 3.02, 3.03, 5.03, 8.01 and 9.01 (excluding exhibit 99.1) only), June 29, 2010 (Item 8.01 only), July 14, 2010 and July 26, 2010; 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.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address:

Cell Therapeutics, Inc.
501 Elliott Avenue West, Suite 400
Seattle, Washington 98119
(206) 282-7100
Attention: Investor Relations

Such filings are also available to the public free of charge at www.sec.gov.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

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

- any projections of cash resources, revenues, operating expenses or other financial terms;
- any statements of the plans and objectives of management for future operations or programs;
- any statements regarding our ability to obtain shareholder approval of an amendment to our amended and restated articles of incorporation to increase the authorized shares of common stock available for issuance thereunder by 400,000,000 shares;
- any statements concerning proposed new products or services;
- any statements regarding future operations, plans, regulatory filings or approvals;
- any statements on plans regarding proposed or potential clinical trials or new drug filing strategies or timelines;

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- 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,” “may,” “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.

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 pixantrone, 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 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.

Recent Developments

Notice from The NASDAQ Stock Market

On May 3, 2010, we received a notice from NASDAQ indicating that for 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.

NASDAQ Marketplace Rule 5810(c)(3)(A) provides us with a grace period of 180 calendar days, or until November 1, 2010, to regain compliance. We will achieve compliance if the closing bid price of our common stock is \$1.00 per share or more for a minimum of ten consecutive trading days before November 1, 2010.

CONSOB Investigation

On May 5, 2010, the Commissione Nazionale per le Società e la Borsa, or CONSOB, (i) notified us that it has 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 reply 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 July 12, 2010, CONSOB (i) notified us that it has 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 a press release 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 reply to our defenses which were submitted to CONSOB on January 8, 2010. We are planning to submit (within 30 days of July 12, 2010, the notification date of the beginning of the aforesaid preliminary investigation, according to the applicable Italian rules) further defenses that CONSOB will have to evaluate before imposing any possible administrative sanctions.

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4% Notes Exchange Agreements

On May 16, 2010, we entered into privately negotiated exchange agreements, or the exchange agreements, with certain holders of some of our outstanding 4% convertible senior subordinated notes due 2010, or the 4% notes. Pursuant to one of the exchange agreements, we agreed to exchange an aggregate of 4,303,157 shares of our common stock for \$1.8 million aggregate outstanding principal amount of the 4% notes during the week ending May 21, 2010. On May 23, 2010, we delivered a notice of termination of the exchange agreements to each of the holders party to the exchange agreements.

In July 2010, the remaining outstanding balance of our 4% notes reached maturity and we made a cash payment of \$39.3 million to repay the outstanding balance, including accrued interest.

Recent Series 5 Preferred Stock Financing

On May 23, 2010, we entered into a securities purchase agreement pursuant to which we agreed to issue (i) 21,000 shares of our Series 5 Preferred Stock, no par value per share, initially convertible into 52,500,000 shares of common stock, in a registered offering, and (ii) warrants to purchase up to 26,250,000 shares of common stock in a private placement pursuant to an exemption from the registration requirements of the Securities Act, for an aggregate offering price of \$21 million. We refer to these transactions as the Series 5 Financing.

Each warrant has an exercise price of \$0.50 per share of common stock. The warrants are exercisable six months and one day after the date of issuance and terminate four years, six months and one day after the date of issuance, provided that the exercisability of the warrants is subject to, and conditioned upon, our receipt of shareholder approval of an amendment to our amended and restated articles of incorporation to increase the authorized shares of common stock available for issuance thereunder or our notification to holders of the warrants that shares of common stock have become available and are reserved for issuance upon the exercise of the warrants. For a more detailed description of the terms of the warrants, please see Item 1.01 of our Current Report on Form 8-K filed with the SEC on May 27, 2010.

The purchasers elected to convert all 21,000 shares of Series 5 Preferred Stock and to receive 52,500,000 shares of common stock issuable upon such conversion at the closing of the Series 5 Financing on May 27, 2010.

Shareholder Derivative Action

On June 1, 2010, a shareholder derivative action, *Souda v. John H. Bauer et. al.* (Case No 2:10-cv-00905), was filed in the United States District Court for the Western District of Washington. It has been consolidated with the consolidated shareholder derivative actions filed against the members of our board of directors that are pending before Judge Marsha Pechman. Plaintiff Souda has filed a motion to consolidate the Souda action with the consolidated derivative actions and to reconsider the portion of the Court's Order dated May 10, 2010, appointing Robbins Umeda LLP and Federman & Sherwood as co-lead derivative counsel. The Souda plaintiff's motion is currently pending.

Value Added Tax Assessment

On June 25, 2010, the Italian Tax Authority, or ITA, issued notices of assessment to Cell Therapeutics Inc. – Sede Secondaria, or CTI (Europe), based on the ITA's audit of CTI (Europe)'s value added tax, or VAT, returns for the years 2006 and 2007. 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 2006 and 2007 are €2.5 million and €0.8 million as of June 30, 2010, respectively. On July 14, 2010, the ITA issued a notice of deposit payment to CTI (Europe) based on the 2005 assessment including interest and collection fees for an amount of €0.9 million, payable in the third quarter 2010. We filed a petition with the Italian Tax Court for suspension of the 2005 notice of deposit payment. We believe that the services invoiced were non-VAT taxable consultancy services and that the VAT returns are correct as originally filed. We intend to vigorously defend ourselves against the assessments and have requested a dismissal on procedural grounds and merits of the case.

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Special Meeting of Shareholders

On June 29, 2010, we permanently adjourned our special meeting of shareholders, at which our shareholders were asked to vote on a proposal to amend our amended and restated articles of incorporation to increase the total number of authorized shares of our stock from 810,000,000 shares to 1,210,000,000 shares and to increase the total number of our authorized shares of common stock from 800,000,000 to 1,200,000,000 shares of common stock. We have called an annual meeting of shareholders to be held on September 16, 2010, or the annual meeting, at which our shareholders will again be asked to vote on, among other matters, the proposed amendment to our amended and restated articles of incorporation to increase the number of authorized shares of common stock available for issuance thereunder.

Warrants Exchange Agreement

On July 25, 2010, we entered into a privately negotiated exchange agreement with an accredited investor to exchange existing warrants to purchase up to an aggregate of 4,320,000 shares of our common stock at an exercise price of \$1.18 per share for new warrants to purchase up to the same number of shares of common stock at an exercise price of \$0.42 per share. In connection with such exchange, the investor will give up the requirement in its existing warrants that we reserve shares underlying its warrants. The exchange will be exempt from the registration requirements of the Securities Act, pursuant to Section 4(2) thereof. We refer to these transactions as the Warrant Exchange.

The new warrants will be exercisable at any time on or after the six month and one day anniversary of the date of initial issuance and on or before the four year, six month and one day anniversary of the date of initial issuance, provided that the new warrants will not be exercisable unless and until (i) we amend our amended and restated articles of incorporation to increase the authorized shares of common stock available for issuance thereunder by 400 million shares after receiving shareholder approval thereof or (ii) we notify the holders of the new warrants that shares of common stock have become available and are reserved for issuance upon exercise of the new warrants. In the event that shares of common stock become available for reservation following the date of initial issuance of the new warrants, we will reserve all or a portion of such shares for issuance upon exercise of the new warrants, provided that if shares of common stock must be reserved pursuant to the terms of any outstanding warrants to purchase common stock issued on or about May 27, 2010, shares must be reserved for issuance upon the exercise of those warrants in priority to the reservation of shares for issuance upon the exercise of the new warrants. The foregoing obligation does not apply to shares of common stock reserved pursuant to our equity incentive plans. The initial exercise price for the new warrants will be \$0.42 per share.

The Warrant Exchange is scheduled to close on July 27, 2010.

Recent Series 6 Preferred Stock Financing

On July 25, 2010, we entered into a privately negotiated securities purchase agreement with the purchaser thereunder, or the purchaser. Pursuant to the purchase agreement, we agreed to issue to the purchaser, in a private offering pursuant to Section 4(2) of the Securities Act, (i) 4,060 shares of Series 6 Preferred Stock and (ii) warrants to purchase up to an aggregate of 5,800,000 shares of common stock, for an aggregate offering price of \$4.06 million. We refer to these transactions as the Series 6 Financing.

The warrants to be issued pursuant to the Series 6 Financing will be in substantially the same form as the new warrants that we agreed to issue pursuant to the Warrant Exchange.

Pursuant to the securities purchase agreement, the purchaser agreed not to transfer its Series 6 Preferred Stock or the common stock issuable upon conversion of its Series 6 Preferred Stock until after 12:01 a.m., Seattle time on July 28, 2010.

We are registering the shares of Series 6 Preferred Stock covered by this prospectus supplement and the shares of common stock issuable from time to time upon conversion of the Series 6 Preferred Stock covered by this prospectus supplement in order to fulfill our obligation under the securities purchase agreement with respect to maintaining, subject to certain conditions, an effective registration statement covering resales of the shares of Series 6 Preferred Stock and common stock.

The Series 6 Financing is scheduled to close on July 27, 2010.

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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.

Maximum number of securities offered by the selling shareholder	4,060 shares of Series 6 Preferred Stock and the 11,600,000 shares of common stock issuable from time to time upon conversion of the Series 6 Preferred Stock.
Description of the Series 6 Preferred Stock	
Dividends	Holders of the Series 6 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 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 anticipate declaring or paying cash dividends on our common stock in the foreseeable future. See “Dividend Policy.”
Optional conversion	The Series 6 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 6 Preferred Stock of \$1,000 per share to be converted by the conversion price, which is initially \$0.35. The initial conversion price is subject to adjustment in certain events, including a non-stock fundamental change or a common stock fundamental change, which are explained in more detail under the section entitled “Description of Series 6 Preferred Stock.”
Automatic conversion	At any time 1,000 or less shares of Series 6 Preferred Stock remain outstanding or our board of directors determines to do a reverse stock split with respect to our common stock for good faith business reasons, the Series 6 Preferred Stock shall automatically convert into the number of shares of common stock determined by dividing the aggregate stated value of the Series 6 Preferred Stock being converted by the conversion price then in effect, subject only to the limitations on conversion described below.
Limitations on conversion	Except in connection with an automatic conversion occurring more than one month after the date of the first issuance of any shares of Series 6 Preferred Stock, we cannot effect a conversion of the Series 6 Preferred Stock, and no holder may request a conversion of its Series 6 Preferred Stock, to the extent such conversion would result in the holder and its affiliates beneficially owning more than 4.99% of our common stock, provided that a holder may elect to increase the conversion threshold to 9.99% of our common stock by providing us with 61 days’ prior notice.
Liquidation preference	In the event of our voluntary or involuntary dissolution, liquidation or winding up, each holder of Series 6 Preferred Stock will be entitled to be paid a liquidation preference equal to the initial stated value of such holder’s Series 6 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 6 Preferred Stock.
Voting rights	The Series 6 Preferred Stock will vote with our common stock on an as-converted basis. In addition, so long as at least 20% of the aggregate originally issued shares of the Series 6 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 6 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 6 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 Series 6 Preferred Stock.

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Use of proceeds	All shares of Series 6 Preferred Stock and common stock sold pursuant to this prospectus supplement and the accompanying prospectus will be sold by the selling shareholder. We will not receive any of the proceeds from such sales.
Market for the Series 6 Preferred Stock	There is no established public trading market for the Series 6 Preferred Stock and we do not expect a market to develop. In addition, we do not intend to apply for listing the Series 6 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 July 26, 2010, the last reported sale price of our common stock on The NASDAQ Capital Market was \$0.40. For information relating to a notice we received from NASDAQ, see "Summary—Recent Developments—Notice from The NASDAQ Stock Market."

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 24 of our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2010, filed with the SEC on May 6, 2010, 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. Additional risks and uncertainties that we do not presently know or that we currently deem immaterial may also impair our business, financial condition, operating results and prospects.

Risks Related to 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 March 31, 2010 we had cash and cash equivalents of \$41.5 million. As of March 31, 2010, our total current liabilities were \$61.5 million, including \$40.4 million related to our 4% notes which were due in July 2010. We repaid the outstanding principal amount and accrued but unpaid interest on our 4% notes in July 2010. The aggregate long-term principal balance of our outstanding 7.5% and 5.75% convertible senior notes as of March 31, 2010 was \$21.2 million. We do not expect that our existing cash and cash equivalents, as well as proceeds received from our offerings to date (including from the Series 5 Financing and the Series 6 Financing), will provide sufficient working capital to fund our presently anticipated operations beyond the fourth quarter of 2010. Raising additional capital will likely require that we issue additional shares of our common stock, of which substantially all of our authorized shares are either outstanding or reserved for future issuance. On June 29, 2010, we permanently adjourned our special meeting of shareholders, at which our shareholders were asked to vote on a proposal to amend our amended and restated articles of incorporation to increase the total number of authorized shares of our stock from 810,000,000 shares to 1,210,000,000 shares and to increase the total number of our authorized shares of common stock from 800,000,000 to 1,200,000,000 shares of common stock. We have called the annual meeting at which our shareholders will again be asked to vote on, among other matters, the proposed amendment to our amended and restated articles of incorporation. We may not obtain sufficient votes from our shareholders for this amendment, which will limit our ability to raise additional funds through the issuance of additional shares and our ability to exchange for equity our outstanding notes. 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. There can be no assurance that we will have sufficient earnings, access to liquidity or cash flow in the future to meet our operating expenses and other obligations, including our debt service obligations.

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 pixantrone, OPAXIO and brostallicin, and may be forced to cease operations, liquidate our assets and possibly seek bankruptcy protection. A bankruptcy may result in the termination of agreements pursuant to which we license certain intellectual property rights, including the rights to OPAXIO, pixantrone and brostallicin.

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

On June 29, 2010, we permanently adjourned our special meeting of shareholders, at which our shareholders were asked to vote on a proposal to amend our amended and restated articles of incorporation to increase the total number of authorized shares of our stock from 810,000,000 shares to 1,210,000,000 shares and to increase the total number of our authorized shares of common stock from 800,000,000 to 1,200,000,000 shares of common stock. We have called the annual meeting at which our shareholders will again be asked to vote on, among other matters, the proposed amendment to our amended and restated articles of incorporation to increase the number of authorized shares of common stock available for issuance thereunder. There is a risk that we may not get shareholder approval to increase the number of authorized shares of common stock. We do not have enough shares authorized at present to effect an equity financing of any substantial amount following the Series 6 Financing, to effect an exchange for equity of our outstanding notes or to allow the holders of warrants issued pursuant to the Series 5 Financing to exercise those warrants and, on the date we expect to close the Warrant Exchange and Series 6 Financing, we will not have enough shares authorized to allow the holders of the warrants issued in the Warrant Exchange and Series 6 Financing to exercise those warrants. If we do not receive shareholder approval for the proposed increase in authorized shares, our ability to raise capital through equity financings and our ability to exchange for equity our outstanding notes will be adversely affected and the holders of the warrants issued pursuant to the Series 5 Financing, Warrant Exchange and Series 6 Financing will not be able to exercise those warrants.

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

On July 2, 2009, after several requests of supplements, clarifications and submissions of new drafts of our registration document, CONSOB informed us that the relevant administrative procedure for CONSOB's authorization to publish the registration document had expired since CONSOB alleged that we had not amended the text of the registration document to provide certain information CONSOB had requested. On July 23, 2009, we filed a new draft of the registration document and on September 24, 2009, CONSOB approved publication of such registration document. On September 29, 2009, we published the registration document in Italy and we may use it to register our securities on the Italian stock market.

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The registration document will be effective for twelve months from the date of its publication (i.e., twelve months from September 29, 2009). Within such twelve-month period, we will also have to obtain CONSOB's clearance over the relevant securities note and summary, which together with the registration document, will constitute a listing prospectus. A listing prospectus allows us to issue common stock and have it admitted to listing on the Italian MTA over the aforesaid threshold of 10% of the number of shares of our common stock outstanding at the beginning of any twelve-month period (except for the further exemptions to the publication of a prospectus provided under Section 57 of the CONSOB's Rules no. 11971/99, as subsequently amended). We have already reached this 10% threshold limit through issuances of shares of our common stock over the past twelve months. Pending CONSOB's clearance of the securities note and the summary, we are required to raise money using alternative forms of securities. For example, we may need to use convertible preferred stock and convertible debt in lieu of our common stock because convertible preferred stock and convertible debt, subject to the provisions of European Directive No. 71/2003 and according to the interpretations of the Committee of European Securities Regulators are not subject to the 10% limitation imposed by European Union 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., or Midsummer, 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. The sanctions established by the Section 193, paragraph 1 of the Italian Legislative Decree no. 58/1998 for such violations are pecuniary administrative sanctions amounting to between €5,000 and €500,000, 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 (i) notified us that it has begun the preliminary investigation for its decision on these administrative proceedings and (ii) provided us with a preliminary investigation report in reply to our defenses submitted on August 28, 2009. On June 4, 2010 (within 30 days of May 5, 2009, 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 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 reported, at CONSOB's request, in the press release disseminated on December 19, 2008 and March 23, 2009. The sanctions established by the 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, applicable to each one 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 (i) notified us that it has begun the preliminary investigation for its decision on these administrative proceedings and (ii) provided us with a preliminary investigation report in reply to our defenses submitted on January 8, 2010. We are planning to submit (within 30 days of July 12, 2010, the notification date of the beginning of the aforesaid preliminary investigation, according to the applicable Italian rules) further defenses that CONSOB will have to evaluate before imposing any possible administrative sanctions.

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

Our European operations are subject to VAT, which is usually applied to all goods and services purchased and sold throughout Europe. The VAT receivable is \$5.2 million and \$6.3 million as of March 31, 2010 and December 31, 2009. On April 14, 2009 and December 21, 2009, the Italian Tax Authority, or 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. On June 25, 2010, the ITA issued notices of assessment to CTI (Europe) for the years 2006 and 2007 based on similar findings of 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 €0.8million, as of June 30, 2010, respectively. On July 14, 2010, the ITA issued a notice of deposit payment to CTI (Europe) based on the 2005 assessment including interest and collection fees for an amount of €0.9 million, payable in the third quarter 2010. We filed a petition with the Italian Tax Court for suspension of the 2005 notice of deposit payment. We believe that the services invoiced were non-VAT taxable consultancy services and that the VAT returns are correct as originally filed. We intend to vigorously defend ourselves against the assessments and have requested a dismissal on procedural grounds and merits of the case. However, if we are unable to defend ourselves against the assessments and if we receive an assessment for subsequent years, it may harm our results of operations and financial condition.

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We cannot guarantee that we will obtain regulatory approval to manufacture or market any of our drug candidates.

Obtaining regulatory approval to market drugs to treat cancer is expensive, difficult and risky. Preclinical and clinical data can be interpreted in different ways, which could delay, limit or preclude regulatory approval. Negative or inconclusive results or adverse medical events during a clinical trial could delay, limit or prevent regulatory approval.

At the meeting of the Oncologic Drugs Advisory Committee, or ODAC, on March 22, 2010, the ODAC panel did not recommend approval of our New Drug Application, or NDA, for pixantrone. Subsequently, we received a Complete Response Letter from the FDA regarding our NDA for pixantrone. The FDA cited as its primary reason for the action its concerns previously raised at the ODAC meeting on March 22, 2010 and recommended that we conduct an additional clinical trial to demonstrate the safety and effectiveness of pixantrone. We expect that we will need at least an additional clinical trial to obtain FDA approval of our NDA for pixantrone and we do not know what this trial will cost. We may also need more than one additional clinical trial or we may need to take additional steps to obtain regulatory approval of pixantrone. The expense to design and conduct clinical trials are substantial and any additional clinical trials or actions we may need to pursue to obtain approval of our NDA for pixantrone may negatively affect our business, financial condition and results of operations.

Products that appear promising in research and development may be delayed or fail to reach later stages of development or the market.

The successful development of pharmaceutical products is highly uncertain and obtaining regulatory approval to market drugs to treat cancer is expensive, difficult and risky. Products that appear promising in research and development may be delayed or fail to reach later stages of development or the market for several reasons, including:

- clinical trial results may show the product to be less effective than desired or to have harmful or problematic side effects;
- preclinical tests may show the product to be toxic or lack efficacy in animal models;
- failure to receive the necessary U.S. and international regulatory approvals or a delay in receiving such approvals;
- difficulties in formulating the product, scaling the manufacturing process or getting approval for manufacturing;
- manufacturing costs, pricing, reimbursement issues or other factors may make the product uneconomical to commercialize;
- other companies or people have or may have proprietary rights to a product candidate, such as patent rights, and will not let the product candidate be sold on reasonable terms, or at all; or
- the product candidate is not cost effective in light of existing therapeutics.

Preclinical and clinical data can be interpreted in different ways, which could delay, limit or prevent regulatory approval. Negative or inconclusive results or adverse medical events during a clinical trial could delay, limit or prevent regulatory approval. In addition, any significant problem in the production of our products, such as the inability of a supplier to provide raw materials or supplies used to manufacture our products, equipment obsolescence, malfunctions or failures, product quality or contamination problems, or changes in regulatory requirements or standards that require modifications to our manufacturing process could delay, limit or prevent regulatory approval which could have a material adverse effect on our business, financial condition and results or the trading price of our securities. There can be no assurance as to whether or when we will receive regulatory approvals for our products.

If there is an adverse outcome in the securities class actions 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 action 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 May 5, 2009 through March 19, 2010, and seek unspecified damages. As is typical in this type of litigation, additional purported securities class action and shareholder derivative lawsuits containing substantially similar allegations could be filed in the near future. We expect that all of the actions will be consolidated into one consolidated securities class action and one consolidated derivative action. 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.

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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.

Effective with the opening of trading on January 8, 2009, the U.S. listing of our common stock was transferred to The NASDAQ Capital Market, subject to meeting a minimum market value of listed securities of \$35 million. 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 demonstrate compliance with all applicable standards for continued listing on The NASDAQ Capital Market, including the \$35 million minimum market capitalization requirement. In addition, the Panel issued a public reprimand for our prior failures to comply with the shareholder approval requirements and late filing of "Listing of Additional Shares" forms. On April 2, 2009, we were notified by NASDAQ that we had complied with the Panel's decision dated March 6, 2009, and, accordingly, the Panel had determined to continue the listing of our common stock on The NASDAQ Capital Market.

NASDAQ reinstated the \$1.00 minimum bid price requirement on August 3, 2009 and there can be no assurances that our common stock price will be \$1.00 or above. 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 have been provided a grace period of 180 calendar days, or until November 1, 2010, to regain compliance. We will achieve compliance if the bid price of our common stock closes at \$1.00 per share or more for a minimum of ten consecutive trading days before November 1, 2010. 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. 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, CONSOB 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 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 conditions at any time, and there can be no guarantee that CONSOB or NASDAQ will not halt trading in our shares again in the future.

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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 have a material adverse effect on our ability to raise the capital we need.

Risks Related to this Offering

There is no public market for the Series 6 Preferred Stock being offered in this offering.

There is no established public trading market for the Series 6 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 6 Preferred Stock on any securities exchange. Without an active market, the liquidity of the Series 6 Preferred Stock will be limited.

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Purchasers of Series 6 Preferred Stock who convert their Series 6 Preferred Stock into common stock will incur immediate dilution.

Upon conversion of your shares of Series 6 Preferred Stock into shares of common stock, you will experience immediate and substantial dilution because the per share conversion price of your shares of Series 6 Preferred Stock 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. Furthermore, if 1,000 or less shares of Series 6 Preferred Stock are outstanding, all outstanding shares of Series 6 Preferred Stock will automatically convert into shares of common stock.

Holders of our Series 6 Preferred Stock will have no rights as a holder of common stock until they acquire common stock.

Until you acquire shares of common stock upon conversion of your Series 6 Preferred Stock, you will have no rights with respect to our common stock, other than the right to receive dividends equal to, and on the same terms as, dividends actually paid on common stock and the right to vote with the common stock on an as-converted basis. Upon conversion of your Series 6 Preferred Stock, 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 conversion date.

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

We are not restricted from issuing additional shares of common stock or preferred stock, including any securities that are convertible into or exchangeable for, or that represent the right to receive, shares of common stock or preferred stock or any substantially similar securities. The market price of our shares of common stock or preferred stock could decline as a result of sales of a large number of shares of our common stock or preferred stock or similar securities in the market, or the perception that such sales could occur in the future. In addition, we are asking our shareholders to approve an amendment to our amended and restated articles of incorporation to increase the total number of authorized shares of our stock from 810,000,000 shares to 1,210,000,000 shares and to increase the total number of our authorized shares of common stock from 800,000,000 to 1,200,000,000 shares of common stock at the annual meeting. If our shareholders approve the amendment, we would have a substantial number of additional shares of common stock that could be issued.

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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 July 26, 2010, our stock price has ranged from a low of \$0.12 to a high of \$1.83. 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 2010 to generate additional funds to cover our current debt and operating expenses;
- our quarterly operating results;
- developments or disputes concerning patent or other proprietary rights;
- developments in our relationships with collaborative partners;
- acquisitions or divestitures;
- litigation and government proceedings;
- adverse legislation, including changes in governmental regulation;
- third-party reimbursement policies;
- changes in securities analysts' recommendations;
- short selling;
- changes in health care policies and practices;
- halting or suspension of trading in our common stock by NASDAQ, CONSOB or the Borsa Italiana;
- economic and other external factors; and
- general market conditions.

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 May 5, 2009 through March 19, 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.

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;

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- procedures for advance notification of shareholder nominations and proposals;
- the ability of our board of directors to amend our amended and restated bylaws without shareholder approval; and
- the ability of our board of directors to issue shares of preferred stock without shareholder approval upon the terms and conditions and with the rights, privileges and preferences as the board of directors may determine.

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 stockholders might believe to be in their best interest or that could give our stockholders 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.

SUMMARY OF THE UNDERLYING TRANSACTION

On July 25, 2010, we entered into a privately negotiated securities purchase agreement with the purchaser. Pursuant to the purchase agreement, we agreed to issue to the purchaser, in a private offering pursuant to Section 4(2) of the Securities Act, (i) 4,060 shares of Series 6 Preferred Stock and (ii) warrants to purchase up to an aggregate of 5,800,000 shares of common stock, for an aggregate offering price of \$4.06 million.

The warrants will be exercisable at any time on or after the six month and one day anniversary of the date of initial issuance and on or before the four year, six month and one day anniversary of the date of initial issuance, provided that the warrants will not be exercisable unless and until (i) we amend our amended and restated articles of incorporation to increase the authorized shares of common stock available for issuance thereunder by 400 million shares after receiving shareholder approval thereof or (ii) we notify the holders of the warrants that shares of common stock have become available and are reserved for issuance upon exercise of the warrants. In the event that shares of common stock become available for reservation following the date of initial issuance of the warrants, we will reserve all or a portion of such shares for issuance upon exercise of the warrants, provided that if shares of common stock must be reserved pursuant to the terms of any outstanding warrants to purchase common stock issued on or about May 27, 2010, shares must be reserved for issuance upon the exercise of those warrants in priority to the reservation of shares for issuance upon the exercise of the warrants. The foregoing obligation does not apply to shares of common stock reserved pursuant to our equity incentive plans. The initial exercise price for the warrants will be \$0.42 per share.

Pursuant to the securities purchase agreement, the purchaser agreed not to transfer its Series 6 Preferred Stock or the common stock issuable upon conversion of its Series 6 Preferred Stock until after 12:01 a.m. Seattle time on July 28, 2010.

We are registering the shares of Series 6 Preferred Stock covered by this prospectus supplement and the shares of common stock issuable from time to time upon conversion of the Series 6 Preferred Stock covered by this prospectus supplement in order to fulfill our obligation under the securities purchase agreement with respect to maintaining, subject to certain conditions, an effective registration statement covering resales of the shares of Series 6 Preferred Stock and common stock.

The Series 6 Financing is scheduled to close on July 27, 2010.

USE OF PROCEEDS

All shares of Series 6 Preferred Stock and the shares of common stock issuable from time to time upon conversion of the Series 6 Preferred Stock sold pursuant to this prospectus supplement and the accompanying prospectus will be sold by the selling shareholder. We will not receive any of the proceeds from such sales.

SELLING SHAREHOLDER

When we refer to the “selling shareholder” in this prospectus supplement, we mean the entity listed in the table below, as well as its transferees, pledgees or donees or their successors.

We agreed to issue the shares of Series 6 Preferred Stock covered by this prospectus supplement to the selling shareholder in the Series 6 Financing pursuant to the securities purchase agreement described above under “Summary of the Underlying Transaction.” The selling shareholder may, at any time and from time to time following the issuance of the shares of Series 6 Preferred Stock to the selling shareholder, offer and sell pursuant to this prospectus supplement and the accompanying prospectus, in any type of transaction, any or all of the 4,060 shares of the Series 6 Preferred Stock and/or 11,600,000 shares of our common stock issuable upon the conversion of the Series 6 Preferred Stock covered by this prospectus supplement, all as more fully described in “Plan of Distribution.” The following tables and related footnotes set forth information with respect to the selling shareholder and the number of shares of Series 6 Preferred Stock and common stock issuable upon conversion of the Series 6 Preferred Stock, in each case, that may be sold pursuant to this prospectus supplement and the attached prospectus. They also show the total number of shares of common stock and Series 6 Preferred Stock owned by the selling shareholder before and after the offering, and the percentage of our total outstanding shares of common stock and Series 6 Preferred Stock held by the selling shareholder before and after the offering. Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to shares of our common stock.

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The selling shareholder may offer all, some or none of the shares of Series 6 Preferred Stock and/or common stock covered by this prospectus supplement, in one or more offerings. Because the selling shareholder may offer all or some portion of the shares of Series 6 Preferred Stock and/or common stock covered by this prospectus supplement, no estimate can be given as to the amount of the shares of Series 6 Preferred Stock and/or common stock that will be held by the selling shareholder upon termination of any sales. In addition, the selling shareholder may sell, transfer or otherwise dispose of all or a portion of their Series 6 Preferred Stock and/or shares of common stock issuable upon conversion of the Series 6 Preferred Stock in transactions exempt from the registration requirements of the Securities Act after 12:01 a.m. Seattle time on July 28, 2010. The following table may be expanded or supplemented in prospectus supplements if and when necessary.

The selling shareholder does not have, and has not had within the past three years, any material relationship with us or any of our predecessors or affiliates and we are advised that the selling shareholder is not a registered broker-dealer or an affiliate of a registered broker-dealer. The information is based on information provided by or on behalf of the selling shareholder to us in a selling shareholder questionnaire and is as of the date specified by the selling shareholder in such questionnaire.

<u>Selling Shareholder</u>	<u>Number of Shares of Series 6 Preferred Stock Beneficially Owned Prior to Offering</u>	<u>Percentage of Series 6 Preferred Stock Beneficially Owned Prior to Offering</u>	<u>Number of Shares of Series 6 Preferred Stock Being Offered⁽²⁾</u>	<u>Number of Shares of Series 6 Preferred Stock Beneficially Owned After Offering</u>	<u>Percentage of Series 6 Preferred Stock Beneficially Owned After Offering</u>
Cranshire Capital, L.P. ⁽¹⁾	4,060	100%	4,060	—	—

<u>Selling Shareholder</u>	<u>Number of Shares of Common Stock Beneficially Owned Prior to Offering⁽³⁾</u>	<u>Percentage of Common Stock Beneficially Owned Prior to Offering⁽⁴⁾</u>	<u>Number of Shares of Common Stock Being Offered⁽⁵⁾</u>	<u>Number of Shares of Common Stock Beneficially Owned After Offering</u>	<u>Percentage of Common Stock Beneficially Owned After Offering⁽⁶⁾</u>
Cranshire Capital, L.P. ⁽¹⁾	15,138,812	2.0%	11,600,000	3,538,812	

- (1) Downview Capital, Inc. (“Downview”) is the general partner of Cranshire Capital, L.P. (“Cranshire”) and consequently has voting control and investment discretion over securities held by Cranshire. Mitchell P. Kopin (“Mr. Kopin”), President of Downview, has voting control over Downview. As a result of the foregoing, each of Mr. Kopin and Downview may be deemed to have beneficial ownership (as determined under Section 13(d) of the Securities Exchange Act of 1934, as amended) of the shares of common stock beneficially owned by Cranshire.
- (2) Assumes the offer and sale of all shares of Series 6 Preferred Stock beneficially owned by the selling shareholder, although the selling shareholder is not obligated to sell any securities.
- (3) Includes 2,963,565 shares of common stock underlying warrants that are immediately exercisable and 11,600,000 shares of common stock underlying the Series 6 Preferred Stock that are immediately convertible.
- (4) Based on 746,875,531 shares of common stock outstanding as of July 23, 2010.
- (5) Assumes the offer and sale of all shares of common stock underlying Series 6 Preferred Stock beneficially owned by the selling shareholder, although the selling shareholder is not obligated to sell any securities.
- (6) Represents less than 1% of our outstanding common stock.

PLAN OF DISTRIBUTION

Following the issuance of the Series 6 Preferred Stock to the selling shareholder, the selling shareholder may offer, sell, transfer or otherwise dispose of the shares of Series 6 Preferred Stock and/or common stock covered by this prospectus supplement from time to time on any stock exchange on which the shares are listed, in the over-the-counter market, in privately negotiated transactions or otherwise. The selling shareholder may offer, sell, transfer, or otherwise dispose of these shares at fixed prices that may be changed, at market prices prevailing at the time of sale, at prices related to prevailing market prices or at prices otherwise negotiated. The selling shareholder will act independently of us in making decisions with respect to the timing, manner and size of each sale, and we cannot assure you that the selling shareholder will sell all or any portion of the shares offered hereby. We will not receive any proceeds from the sales by the selling shareholder of shares of Series 6 Preferred Stock and/or common stock covered by this prospectus supplement.

The selling shareholder may offer and sell the shares of Series 6 Preferred Stock and/or common stock covered by this prospectus supplement by one or more of the following methods at various times:

- block trades in which a broker or dealer will be engaged to attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker or dealer as principal and resale by the broker or dealer for its own account pursuant to this prospectus supplement;

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- ordinary brokerage transactions and transactions in which the broker solicits purchases;
- “at the market” transactions to or through market makers or into an existing market for our common stock;
- privately negotiated transactions;
- short sales;
- options, swaps or other derivative transactions that may or may not be listed on an exchange;
- distributions to their respective partners, members, managers, directors, employees, consultants or affiliates; or
- any combination of the above methods or by any other legally available means.

The selling shareholder may engage brokers and dealers, and any brokers or dealers may arrange for other brokers or dealers to participate in effecting sales of the shares. These brokers or dealers may act as principals, or as agents of the selling shareholder. Broker-dealers may agree with the selling shareholder to sell a specified number of shares of Series 6 Preferred Stock and/or common stock at a stipulated price per share. If a broker-dealer is unable to sell shares acting as agent for the selling shareholder, it may purchase as principal any unsold shares at the stipulated price. Broker-dealers who acquire shares of Series 6 Preferred Stock and/or common stock covered by this prospectus supplement as principals may thereafter resell the shares from time to time in transactions on any stock exchange on which the shares are then listed, at prices and on terms then prevailing at the time of sale, at prices related to the then-current market price or in negotiated transactions. Broker-dealers may use block transactions and sales to and through broker-dealers, including transactions of the nature described above.

To the extent required under the Securities Act, the names of any agents, underwriters, brokers or dealers and any applicable commission with respect to a particular offering will be set forth in an additional prospectus supplement. Any underwriters, dealers, brokers or agents participating in the distribution of the shares may receive compensation in the form of discounts, concessions, commissions or fees from the selling shareholder and/or purchasers of the selling shareholder’s shares, for which they may act, which compensation as to a particular broker-dealer might be in excess of customary commissions.

Any brokers, dealers or agents that participate in the distribution of shares may be deemed to be “underwriters” within the meaning of the Securities Act, and any discounts, concessions, commissions or fees received by them and any profit on the resale of shares sold by them may be deemed to be underwriting discounts and commissions.

We will make copies of this prospectus supplement available to the selling shareholder for purposes of satisfying the prospectus delivery requirements of the Securities Act, if applicable.

The selling shareholder may enter into hedging transactions with broker-dealers and the broker-dealers may engage in short sales of common shares in the course of hedging the positions they assume with the selling shareholder, including, without limitation, in connection with distributions of shares by those broker-dealers. The selling shareholder may enter into option or other transactions with broker-dealers that involve the delivery of shares offered hereby to the broker-dealers, who may then resell or otherwise transfer those securities.

The selling shareholder and other persons participating in the sale or distribution of shares will be subject to applicable provisions of the Exchange Act, and the rules and regulations thereunder, including Regulation M; and we have advised the selling shareholder that Regulation M may apply. This regulation may limit the timing of purchases and sales of any shares by the selling shareholder and any other person. The anti-manipulation rules under the Exchange Act may apply to sales of shares in the market and to the activities of the selling shareholder and its affiliates. Furthermore, Regulation M may restrict the ability of any person engaged in the distribution of shares to engage in market-making activities with respect to the particular shares being distributed for a period of up to five business days before the distribution. These restrictions may affect the marketability of the shares and the ability of any person or entity to engage in market-making activities with respect to the securities.

The selling shareholder may also sell shares in accordance with Rule 144 under the Securities Act rather than pursuant to this prospectus supplement, regardless of whether the shares are covered by this prospectus supplement.

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:

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

- (1) Earnings were not sufficient to cover combined fixed charges and preferred stock dividends. Earnings consist of income (loss) before provision for income taxes plus fixed charges. Fixed charges consist of interest charges and that portion of rental payments under operating leases we believe to be representative of interest. Earnings for the three months ended March 31, 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 \$44.2, \$116.8, \$202.9, \$148.3, \$135.8 and \$102.5 (in millions), respectively. For this reason, no ratios are provided for these periods.

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.

DESCRIPTION OF SERIES 6 PREFERRED STOCK

The material terms and provisions of the Series 6 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 6 Preferred Stock set forth in the articles of amendment to our amended and restated articles of incorporation to be filed as an exhibit to our Current Report on Form 8-K which we will file with the SEC in connection with this offering.

Rank

The Series 6 Preferred Stock will, with respect to dividend rights and rights upon our liquidation, dissolution or winding up, rank senior to our common stock and, so long as at least 20% of the aggregate originally issued shares of the Series 6 Preferred Stock are outstanding, we may not repay, repurchase or offer to repay or repurchase or otherwise acquire any material amount of common stock or other securities junior to the Series 6 Preferred Stock except for repurchases of up to 30,000,000 shares of common stock in any 12-month period from employees, officers, directors, consultants or others who perform services for us and who are subject to an agreement with us providing a right of repurchase of such shares at cost or on the occurrence of certain events, such as termination of employment.

Dividends

Holders of Series 6 Preferred Stock are entitled to receive dividends on shares of the Series 6 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 6 Preferred Stock shall increase the stated value of the Series 6 Preferred Stock, but when such dividends are actually paid such increase shall be rescinded.

Liquidation Preference

Upon our voluntary or involuntary dissolution, liquidation or winding up, holders of the Series 6 Preferred Stock will be entitled to receive the stated value of such holder's shares of Series 6 Preferred Stock of \$1,000 per share plus any accrued and unpaid dividends and other payments that may be due on the shares before the holders of common stock or any of our other junior securities receive any payments from such 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 6 Preferred Stock then outstanding, the assets to be distributed to the holders of the Series 6 Preferred Stock will be ratably distributed among such holders in accordance with the respective amounts that would be payable on such holder's shares if the liquidation preference was paid in full.

Conversion

Optional Conversion

The Series 6 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 6 Preferred Stock being converted by the conversion price then in effect. The initial conversion price is \$0.35 and is subject to adjustment as described below. This right to convert is limited by the beneficial ownership limitation described below.

Automatic Conversion

At any time 1,000 or less shares of Series 6 Preferred Stock remain outstanding or our board of directors determines to do a reverse stock split with respect to our common stock for good faith business purposes, the Series 6 Preferred Stock shall automatically convert into the number of registered shares of common stock determined by dividing the aggregate stated value of the Series 6 Preferred Stock being converted by the conversion price then in effect. This automatic conversion is limited by the beneficial ownership limitation described below.

Beneficial Ownership Limitation

Except in connection with an automatic conversion occurring more than one month after the date of the first issuance of any shares of Series 6 Preferred Stock, we may not effect a conversion, and no holder may request conversion, of the Series 6 Preferred Stock to the extent, following such conversion, the holder and its affiliates would beneficially own more than 4.99% of our common stock, provided that a holder may elect to increase the conversion threshold to 9.99% of our common stock by providing us with 61 days' prior notice. 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.

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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 6 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 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 6 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;
- 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.

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 6 Preferred Stock will be given the same choice on conversion of such holder’s shares.

Voting Rights

The Series 6 Preferred Stock will vote with our common stock on an as-converted basis. In addition, so long as at least 20% of the aggregate initially issued shares of Series 6 Preferred Stock are outstanding, we cannot take any of the following actions without the affirmative consent of holders of a majority of the outstanding Series 6 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 6 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 6 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.

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 800,000,000 shares of common stock, no par value, and 10,000,000 shares of preferred stock, no par value. As of July 23, 2010, there were 746,875,531 shares of common stock outstanding, warrants to purchase approximately 65,773,340 shares of common stock (including warrants to purchase 27,300,000 shares of common stock that were issued in connection with the Series 5 Financing) outstanding and no shares of preferred stock outstanding. Pursuant to the Warrant Exchange, we agreed to exchange warrants to purchase up to an aggregate of 4,320,000 shares of our common stock for new warrants to purchase up to the same number of shares of our common stock. Pursuant to the Series 6 Financing, we agreed to issue 4,060 shares of Series 6 Preferred Stock and warrants to purchase up to an additional 5,800,000 shares of our common stock. The exercisability of the warrants we agreed to issue pursuant to the Warrant Exchange, the Series 5 Financing and the Series 6 Financing will be subject to, and conditioned upon, our receipt of shareholder approval, after the date of issuance, of an amendment to our amended and restated articles of incorporation to increase the authorized shares of common stock available for issuance thereunder by 400,000,000 shares.

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.

At the annual meeting, we are asking our shareholders to approve an amendment to our amended and restated articles of incorporation to increase the total number of authorized shares of our stock from 810,000,000 shares to 1,210,000,000 shares and to increase the total number of our authorized shares of common stock from 800,000,000 to 1,200,000,000 shares of common stock. We cannot provide any assurance that the proposed amendment will be approved.

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.

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

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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 ourself from coverage of this statute. These statutory provisions may have the effect of delaying, deterring or preventing a change in control of the Company.

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

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.

The 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 Investor Services, LLC.

CERTAIN U.S. FEDERAL INCOME TAX CONSIDERATIONS

All purchasers of Series 6 Preferred Stock are advised to consult their own tax advisors regarding the federal, state, local and foreign tax consequences of the purchase, ownership, conversion and disposition of Series 6 Preferred Stock and the ownership and disposition of shares of common stock issuable upon conversion of Series 6 Preferred Stock in their particular situations.

LEGAL MATTERS

The validity of the securities offered hereby has been passed upon by K&L Gates LLP of Seattle, Washington.

PROSPECTUS



Making cancer more treatable

**Common Stock
Preferred Stock
Warrants**

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

- shares of our common stock;
- shares of our preferred stock; and
- warrants to purchase common stock, preferred stock and/or debt 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, update or change the information in this prospectus and will also describe the specific manner in which we will offer the securities.

This prospectus may not be used 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 August 18, 2009, the last reported sale price of our common stock on The NASDAQ Capital Market was \$1.57.

We do not expect our preferred stock or warrants 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 the applicable prospectus supplement 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 August 19, 2009

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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 or warrants, or any combination of these securities, in one or more offerings. There is no limit on the aggregate amount of the securities described in this prospectus that we may sell pursuant to the registration statement.

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, 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 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 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 prospectus may have changed since those dates.

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

In this prospectus, 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.

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 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.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

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

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2008;
- our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2009;
- our Quarterly Report on Form 10-Q for the fiscal quarter ended June 30, 2009;
- our definitive Proxy Statement on Schedule 14A for a Special Meeting of Shareholders, dated and filed with the SEC on January 14, 2009, as amended by Amendment No. 1 to the definitive Proxy Statement on Schedule 14A, dated as of February 4, 2009 and filed with the SEC on February 5, 2009 and Definitive Additional Materials filed with the SEC on January 26, 2009, February 27, 2009 and March 9, 2009;
- our Soliciting Material on Schedule 14A for our 2009 Annual Meeting of Shareholders, dated and filed with the SEC on July 29, 2009, as amended by our Soliciting Material on Schedule 14A, dated and filed with the SEC on August 10, 2009;
- our Current Reports on Form 8-K filed on January 6, 2009, January 8, 2009, January 29, 2009, February 9, 2009, February 23, 2009, March 6, 2009, March 16, 2009 (Items 1.01 and 2.01 only), March 27, 2009, April 13, 2009, April 14, 2009, April 17, 2009, May 12, 2009 (Item 1.01 only), May 15, 2009, May 20, 2009, May 28, 2009, May 29, 2009, June 10, 2009, June 26, 2009, July 7, 2009, July 28, 2009 and August 7, 2009; 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.

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

Cell Therapeutics, Inc.
501 Elliott Avenue West, Suite 400
Seattle, Washington 98119
(206) 282-7100
Attention: Investor Relations

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:

- 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 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.

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In some cases, forward-looking statements can be identified by terms such as “anticipates,” “believes,” “continue,” “could,” “estimates,” “expects,” “may,” “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 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.

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:

	Six months ended June 30,		Year ended December 31,				
	2009	2008	2008	2007	2006	2005	2004
Ratio of earnings to combined fixed charges and preferred stock dividends (1)	—	—	—	—	—	—	—

- (1) Earnings were not sufficient to cover combined fixed charges and preferred stock dividends. Earnings consist of income (loss) before provision for income taxes plus fixed charges. Fixed charges consist of interest charges and that portion of rental payments under operating leases we believe to be representative of interest. Earnings for the six months ended June 30, 2009 and 2008, and for the years ended December 31, 2008, 2007, 2006, 2005 and 2004, were insufficient to cover fixed charges, and fixed charges and preferred stock dividends, by \$40.6, \$113.9, \$202.9, \$148.3, \$135.8, \$102.5 and \$252.3 (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 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.

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