CELL THERAPEUTICS INC
Form 424B5
June 30, 2011
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PROSPECTUS SUPPLEMENT
(To Prospectus Dated February 16, 2011)

Filed Pursuant to Rule 424(b)(5)
Registration Statement No.: 333-161442

CELL THERAPEUTICS, INC.

30,000 Shares of Series 13 Preferred Stock

Warrants to Purchase 8,820,000 Shares of Common Stock

Pursuant to this prospectus supplement and the accompanying prospectus, we are offering 30,000 shares of Series 13 Convertible Preferred Stock, or the Series 13 Preferred Stock, and warrants to purchase up to 8,820,000 shares of common stock, or the warrants (and the approximately 26,467,059 shares of common stock issuable from time to time upon conversion of the Series 13 Preferred Stock and exercise of the warrants), to certain institutional investors (including Rodman & Renshaw, LLC), or, collectively, the Initial Purchasers. The purchase price for each share of Series 13 Preferred Stock and a warrant to purchase 294 shares of common stock is $1,000. Each warrant to purchase shares of our common stock will have an exercise price of $2.15 per share. The warrants are exercisable beginning six months and one day after the date of issuance and expire five years and one day after the date of issuance.

For a more detailed description of the Series 13 Preferred Stock and warrants, see the sections entitled Description of Series 13 Preferred Stock and Description of Warrants beginning on pages S-32 and S-35, respectively, of this prospectus supplement. For a more detailed description of our common stock issuable upon conversion of the Series 13 Preferred Stock and exercise of the warrants, see the section entitled Description of Capital Stock beginning on page S-36 of this prospectus supplement.

Rodman & Renshaw, LLC acted as the sole placement agent and book runner on this transaction. Other than the purchase of 3,000 shares of the Series 13 Preferred Stock and warrants for its own account, and for the account of others, on the same terms and conditions as all other Initial Purchasers in this offering, the placement agent is not purchasing or selling any other securities nor is it required to sell any specific number or dollar amount of securities, but has agreed to use its reasonable best efforts to sell the other securities offered by this prospectus supplement.

This prospectus supplement and the accompanying prospectus also cover the sale of these securities to the public.

The Series 13 Preferred Stock and warrants 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, or the MTA, stock market in Italy under the symbol CTIC. On June 29, 2011, the last reported sale price of our common stock on The NASDAQ Capital Market was $1.96.

Investing in our securities involves a high degree of risk. See the section entitled Risk Factors beginning on page S-9 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 or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	Shares of Series 13 Preferred Stock and warrants	Per share of Series 13 Preferred Stock and warrant(1)	Total
Offering price of the Series 13 Preferred Stock and warrants	30,000	$ 1,000	$ 30,000,000
Placement agent fees(2)		$ 50	$ 1,500,000
Total proceeds to us before other expenses		$ 950	$ 28,500,000

(1) Table excludes shares of common stock issuable upon conversion of the Series 13 Preferred Stock and exercise of the warrants offered hereby.

(2) A fee equal to 5% of the aggregate proceeds raised in this offering will be payable to the placement agent.

In addition to the placement agent fees, the placement agent will receive warrants to purchase up to 352,941 shares of common stock registered pursuant to this prospectus supplement. Trout Capital LLC will also receive a cash fee of 1% of the aggregate proceeds raised in this offering, plus warrants to purchase up to 176,471 shares of common stock registered pursuant to this prospectus supplement, for financial advisory services.

The Series 13 Preferred Stock and warrants will be delivered to the Initial Purchasers on or about July 5, 2011.

This prospectus supplement is dated June 29, 2011.

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Prospectus Supplement

Prospectus

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

We are not making an offer of the Series 13 Preferred Stock and warrants (or the shares of common stock issuable from time to time upon conversion of the Series 13 Preferred Stock and exercise of the warrants) covered by this prospectus supplement in any

jurisdiction where the offer is not permitted.

The information contained in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference is accurate only as of its respective date, regardless of the time of delivery of this prospectus supplement and the accompanying prospectus, or of any sale of the Series 13 Preferred Stock and warrants (or the shares of common stock issuable from time to time upon conversion of the Series 13 Preferred Stock and exercise of the warrants). 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.

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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 13 Preferred Stock and warrants (and the shares of common stock issuable from time to time upon conversion of the Series 13 Preferred Stock and exercise of the warrants) and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference. The second part is the accompanying prospectus, which gives more general information. To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in the accompanying prospectus or any document incorporated by reference, on the other hand, you should rely on the information in this prospectus supplement.

You should read this prospectus supplement, the accompanying prospectus and the documents incorporated by reference before making an investment decision. You should also read and consider the information in the documents we have referred you to in the section of this prospectus supplement entitled Incorporation of Certain Documents by Reference.

In this prospectus supplement, the terms CTI, Company, we, us, our and similar terms refer to Cell Therapeutics, Inc., a Washington corpora 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 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 with the SEC at the public reference facilities maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the public reference facilities by calling the SEC at 1-800-SEC-0330.

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

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

SEC rules allow us to incorporate by reference 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 deemed to be furnished and not filed in accordance with SEC rules) until the offering of the securities under the registration statement is terminated or completed:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2010 filed with the SEC on February 16, 2011;
- our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2011 filed with the SEC on April 26, 2011;
- our Current Reports on Form 8-K filed with the SEC on January 18, 2011 (as amended by our Current Report on Form 8-K/A filed with the SEC on January 28, 2011), February 24, 2011 (as amended by our Current Report on Form 8-K/A filed with the SEC on March 7, 2011), March 14, 2011, March 15, 2011, March 22, 2011, May 2, 2011, May 3, 2011, May 6, 2011, May 18, 2011, June 17, 2011 and June 29, 2010; and

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the description of our capital stock contained in our Registration Statement on Form 10 filed with the SEC 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 later information filed with the SEC may update and supersede some of the information included or incorporated by reference in this prospectus supplement and the accompanying prospectus. This means that you must look at all of the SEC filings that we incorporate by reference to determine if any of the statements in this prospectus supplement and the accompanying prospectus or in any document previously incorporated by reference have been modified or superseded.

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

Cell Therapeutics, Inc.

501 Elliott Avenue West, Suite 400

Seattle, Washington 98119

(206) 282-7100

Attention: Investor Relations

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

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

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

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

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

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

any statements concerning proposed new products or services;

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

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

any statements regarding pending or future mergers or acquisitions; and

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

In some cases, forward-looking statements can be identified by terms such as anticipates, believes, continue, could, estimates, expects, r plans, potential, predicts, should or will or the negative thereof or other comparable terms. Such statements are based on management s curr 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.

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SUMMARY

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

Our Company

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

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

Pixuvri

NDA Appeal

As previously announced on May 3, 2011, the Office of New Drugs, or OND, of the U.S. Food and Drug Administration, or FDA, responded to our December 2010 appeal of the FDA s April 2010 decision to not approve Pixuvri for relapsed or refractory aggressive non-Hodgkin s lymphoma, or NHL. We previously met with officials of the OND regarding our appeal of the FDA s decision to present our arguments supporting our belief that the data contained in the New Drug Application, or NDA, support the conclusion that Pixuvri is effective for its planned use. In its response, the OND indicated that after considering the data available in the appeal, it does not believe that accelerated approval of our NDA is necessarily out of reach based on a single controlled clinical trial, provided that two key matters can be resolved satisfactorily. First, the circumstances of stopping the PIX301 trial early must be resolved to assure that ongoing results assessment were not dictating the decision to stop. Second, ascertainment of the primary endpoint in the PIX301 study must be determined to have been sound and not subject to bias.

The OND also indicated that our request that the OND find that the data in the NDA demonstrate efficacy and return the NDA to the Office of Oncology Drug Products for consideration of safety and other issues was denied because the OND was not able to conclude that efficacy had been demonstrated. However, the OND also did not find that it could be concluded that PIX301 was a failed study, which warranted application of interim analysis statistical thresholds. The OND further indicated that we could re-submit the NDA for a re-review of the safety and efficacy, provided that the two key matters can be resolved satisfactorily.

On June 14, 2011, we announced that we had met with the FDA s Division of Oncology Drug Products, or DODP, in a meeting that focused on the documents we proposed to provide regarding the circumstances of stopping the enrollment of PIX301 prior to achieving the original planned patient accrual and the make-up of the new radiology expert panel as well as our plan to address the items noted in the FDA s Complete Response Letter. The DODP confirmed that the NDA would be reviewed within six months from the resubmission of the NDA. We anticipate filing the additional information later this year; accordingly, it is possible that we could obtain FDA approval as early as the first half of 2012. However, you should not infer that the aforementioned developments increase the likelihood of FDA approval of the NDA or that the FDA, OND or DODP will not require additional actions or information.

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European Medicines Agency

In July 2009, we were notified by the European Medicines Agency, or EMA, that Pixuvri was eligible to be submitted for a Marketing Authorization Application, or an MAA, through the EMA s centralized procedure. The centralized review process provides for a single coordinated review for approval of pharmaceutical products that is conducted by the EMA on behalf of all European Union, or EU, member states. The EMA also designated Pixuvri as a New Active Substance, or NAS; if approved by the EMA, compounds designated as an NAS are eligible to receive a 10-year market exclusivity period in EU member states. In November 2010, the MAA seeking approval for Pixuvri for the treatment of adult patients with multiple relapsed or refractory aggressive NHL was validated and accepted for review by the EMA. In March 2011, we received the Day 120 list of questions from the EMA. In April 2011, we met with the co-rapporteurs and members of the EMA to discuss our proposed responses. Based on feedback and recommendation from the rapporteur, in order to allow time for preclinical reports to be available, we requested and were granted an extension so that our Day 120 responses will address the questions in the Day 120 list. We anticipate submission of data and information addressing the Day 120 questions in late August 2011.

Tosedostat

In March 2011, we entered into a co-development and license agreement with Chroma providing us with exclusive marketing and co-development rights to Chroma s drug candidate tosedostat in North, Central and South America. Tosedostat is an oral, aminopeptidase inhibitor that has demonstrated significant anti-tumor responses in blood related cancers and solid tumors in phase I-II clinical trials. We, in collaboration with Chroma, expect to commence one or more clinical trials in the United States and Europe in patients with hematologic malignancies. The first trial is expected to begin enrollment prior to year-end.

Recent Series 12 Preferred Stock Financing

On April 27, 2011, we entered into a securities purchase agreement with various purchasers party thereto pursuant to which we agreed to issue in a registered offering shares of our Series 12 Preferred Stock, no par value per share, initially convertible into approximately 7.6 million shares of common stock (as adjusted to reflect the one-for-six reverse stock split effected on May 15, 2011), and warrants to purchase up to approximately 3.0 million shares of common stock (as adjusted to reflect the one-for-six reverse stock split effected on May 15, 2011), for an aggregate offering price of approximately $16.0 million. Each warrant has an exercise price of $2.40 per share of common stock (as adjusted to reflect the one-for-six reverse stock split effected on May 15, 2011). The warrants are exercisable commencing on the date of issuance and expire five years and one day after the date of issuance.

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The purchasers elected to convert all shares of Series 12 Preferred Stock and to receive the approximately 7.6 million shares of common stock (as adjusted to reflect the one-for-six reverse stock split effected on May 15, 2011) issuable upon such conversion at the closing of the financing on May 3, 2011.

Retirement of 7.5% Convertible Senior Notes

On May 2, 2011, we announced that we had deposited $10.6 million in cash as trust funds with U.S. Bank National Association, as the trustee of our outstanding 7.5% convertible senior notes, or the 7.5% Notes, representing an amount sufficient to pay and discharge the entire amount due on the 7.5% Notes, including accrued and unpaid interest. As of the date of this prospectus, we have only one series of convertible senior notes on our balance sheet, which mature in December 2011.

Notice from NASDAQ and Reverse Stock Split

On May 3, 2011, we received a notice from NASDAQ, stating that we had not regained compliance with NASDAQ s $1.00 minimum bid price rule under NASDAQ Marketplace Rule 5550(a)(2), or Rule 5550(a)(2). As previously disclosed, on May 3, 2010, we were notified by NASDAQ that we did not meet Rule 5550(a)(2) and were provided until November 1, 2010 to achieve compliance, and on November 2, 2010, we received a notice from NASDAQ indicating that NASDAQ granted us an additional 180 days, or until May 2, 2011, to regain compliance with Rule 5550(a)(2) for continued listing.

On May 5, 2011, in an effort to regain compliance with the NASDAQ listing requirements and increase the per-share trading price of our common stock, our board of directors approved a reverse stock split. On May 13, 2011, we filed Articles of Amendment to our amended and restated articles of incorporation, as amended, or our articles of incorporation, with the Secretary of State of the State of Washington to implement the reverse stock split and reflect the decrease of our total number of authorized shares from 1,210,000,000 shares to 201,666,666 shares and the number of authorized shares of common stock from 1,200,000,000 shares to 200,000,000 shares. On May 15, 2011, the effective date of the reverse stock split, each holder of our common stock received one new share of common stock in exchange for every six shares of common stock such holder owned on the record date.

On June 1, 2011, we announced that we received a letter from NASDAQ indicating that we had regained compliance with Rule 5550(a)(2) and that we were in compliance with all applicable listing standards. As a result, our common stock will continue to be listed and traded on The NASDAQ Capital Market. See Risk Factors Risks Related to Our Company Our common stock is listed on The NASDAQ Capital Market and the MTA in Italy and we may not be able to maintain those listings or trading on these exchanges may be halted or suspended, which may make it more difficult for investors to sell shares of our common stock.

Increase in Authorized Shares

On June 17, 2011, at our special meeting of shareholders, our shareholders approved a proposal to amend our articles of incorporation to reflect an increase in the total number of authorized shares from 201,666,666 to 284,999,999 and an increase in our authorized shares of common stock from 200,000,000 to 283,333,333.

Value Added Tax Assessment

On April 14, 2009 and December 21, 2009, the Italian Tax Authority, or the ITA, issued notices of assessment to CTI (Europe) based on the ITA s audit of CTI (Europe) s VAT returns for the years 2003 and 2005, respectively. On June 25, 2010, the ITA issued notices of assessment to CTI (Europe) for the years 2006 and 2007 based on similar findings for the 2003 and 2005 assessments. The ITA audits concluded that CTI (Europe) did not collect and remit VAT on certain invoices issued to non-Italian clients for services performed by CTI (Europe). The assessments, including interest and penalties, for the years 2003, 2005, 2006 and 2007 are 0.5 million, 5.5 million, 2.5 million and 0.8 million, or approximately $0.8 million, $7.8 million, $3.6 million and $1.2 million converted using the currency exchange rate as of March 31, 2011, respectively. We believe that the services invoiced were non-VAT taxable consultancy services and that the VAT returns are correct as originally filed. We are vigorously defending ourselves against the assessments both on procedural grounds and on the merits of the case. If the decision of the Provincial Tax Court of Milan, or the Tax Court, is unfavorable, then we expect to appeal to the higher courts in order to further defend our interests. However, if we are unable to successfully defend ourselves against the assessments issued by the ITA, we may be requested to pay to the ITA an amount ranging from 4.9 million to 9.4 million, or approximately $7.0 million to $13.3 million converted using the currency exchange rate as of March 31, 2011, plus collection fees, notification expenses and additional interest for the period lapsed between the date in which the assessments were issued and the date of effective payment. On February 2, 2011, we paid to the ITA the required deposit in respect of the 2005 VAT in the amount of 1.5 million, or approximately $2.1 million converted using the currency exchange rate as of February 2, 2011. On March 4, 2011, we paid to the ITA the required deposit in respect of the 2006 VAT in the amount of 0.4 million, or

approximately $0.6 million converted using the currency exchange rate as of March 4, 2011.

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2003 VAT. As of the date of this prospectus supplement, we have not received a notice from the ITA requesting a deposit payment for the VAT based on the 2003 assessment. The first hearing for the discussion of the merits of the case was held on March 18, 2011. The Tax Court has not yet released a decision with respect to the 2003 VAT.

2005 VAT. On July 14, 2010, the ITA issued a notice requiring a deposit payment for the VAT to CTI (Europe) based on the 2005 assessment, including 50% of the assessed VAT, interest and collection fees for an amount of 1.5 million, or approximately $2.2 million converted using the currency exchange rate as of March 31, 2011. We successfully filed a petition with the Tax Court for suspension of the 2005 notice of deposit payment. On September 28, 2010, the merits of the case for the year 2005 were discussed in a public hearing before the Tax Court. On January 13, 2011, the Tax Court issued decision no. 4/2010 in which the Tax Court (i) partially accepted our appeal and declared that no penalties can be imposed against us, (ii) confirmed the right of the Italian Tax Authorities to reassess the VAT (plus interest) in relation to the transactions identified in the 2005 notice of assessment and (iii) repealed the suspension of the notice of deposit payment. As a result of this decision, our exposure for 2005 VAT assessment is currently reduced by the waiver of penalties of 2.6 million, or approximately $3.7 million converted using the currency exchange rate as of March 31, 2011. The ITA has the right to appeal the decision to request for confirmation of the penalties. On February 2, 2011, we paid the required VAT deposit of 1.5 million, or approximately $2.1 million converted using the currency exchange rate as of February 2, 2011, prior to the due date of February 6, 2011. We do not believe that the Tax Court has carefully reviewed all of our arguments, relevant documents and other supporting evidence that our counsel filed and presented during the hearing, including an appraisal from an independent expert, and, therefore, that there are grounds of appeal in order to ask the judges of the higher court to further consider all of our arguments in support of invalidating the entire notice of assessment. Accordingly, we will appeal to the Regional Tax Court and file a complaint with the European Commission. On March 25, 2011, we paid to the Italian collection agent an additional 0.1 million, or approximately $0.1 million converted using the currency exchange rate as of March 25, 2011. The additional payment was for interest and collection fees during the suspension period. We do not believe this additional payment was due and we intend to pursue recovery of such payment through litigation.

While we contend that services invoiced were non-VAT taxable consulting services and that the VAT returns are correct as originally filed, we have recorded a reserve for VAT assessed, interest and collection fees totalling 2.6 million, or approximately $3.7 million as of March 31, 2011, of which $3.2 million is included in long-term obligations, less current portion and $0.5 million of the reserve is accounted for as an offset to VAT receivable included in other assets.

2006 VAT. On January 10, 2011, we received a notice from the ITA requiring a deposit payment for VAT to CTI (Europe) based on the 2006 assessment, including 50% of the assessed VAT, interest and collection fees for an amount of 0.4 million, or approximately $0.6 million converted using the currency exchange rate as of March 31, 2011, payable in the first quarter 2011. We filed a request for suspension of the collection of such amount, which request was rejected. On March 4, 2011, we paid to the ITA the required deposit in respect of the 2006 VAT in the amount of 0.4 million, or approximately $0.6 million converted using the currency exchange rate as of March 4, 2011. The first hearing for the discussion of the merits of the case was held on May 28, 2011. The Tax Court has not yet released a decision with respect to the 2006 VAT.

2007 VAT. As of the date of this prospectus supplement, we have not received a notice from the ITA requesting a deposit payment for the VAT based on the 2007 assessment. The first hearing for the discussion of the merits of the case was held on May 28, 2011. The Tax Court has not yet released a decision with respect to the 2007 VAT.

Securities Class Action and Shareholder Derivative Litigation

On March 12, 2010, a purported securities class action complaint was filed in the United States District Court for the Western District of Washington against the Company and certain of its officers and directors, styled Cyril Sabbagh, individually and on behalf of all others similarly situated v. Cell Therapeutics, Inc., Dr. James A. Bianco, M.D., and Dr. Jack W. Singer (Case No. 2:10-sv-00414), or the Sabbagh action. On March 19, 2010, a substantially similar class action complaint was filed in the same court, styled Michael Laquidari, individually and on behalf of all others similarly situated v. Cell Therapeutics, Inc., Dr. James A. Bianco, M.D., and Dr. Jack W. Singer (Case No. 2:10-cv-00480), or the Laquidari action. On March 31, 2010, a third substantially similar class action complaint was filed in the same court, styled William Snyder, individually and on behalf of all others similarly situated v. Cell Therapeutics, Inc., James A. Bianco, Phillip M. Nudelman, Louis A. Bianco, John H. Bauer, Richard L. Love, Mary O. Mundinger, Jack W. Singer, Frederick W. Telling and Rodman & Renshaw, LLC (Case No. 2:10-cv-00559), or the Snyder action. The securities actions are pending before Judge Marsha Pechman in the Western District of Washington. The securities complaints allege that the

defendants violated the federal securities laws by making certain alleged false and misleading statements. The plaintiffs in the Sabbagh and Laquidari actions seek unspecified damages on behalf of a putative class of purchasers of the Company s securities from May 5, 2009 through February 8, 2010. The plaintiffs in the Snyder action seek unspecified damages on behalf of a putative class of purchasers of the Company s securities from May 5, 2009 through March 19, 2010, including purchasers of securities issued pursuant to or traceable to the Company s July 22, 2009 public offering. On August 2, 2010, the court consolidated the securities actions, appointed lead plaintiffs, and approved lead plaintiffs counsel. On September 27, 2010, lead plaintiff filed an amended consolidated complaint with a purported class period of March 25, 2008 through March 22, 2010. On October 27, 2010, the defendants filed a motion to dismiss the amended consolidated complaint. Plaintiffs filed an opposition on December 3, 2010, and defendants filed their reply on December 22, 2010. The hearing on the motion to dismiss was held on January 28, 2011. On February 4, 2011, the court issued an order denying in large part the defendants motion. The court has set a trial date of June 25, 2012 for the securities class action.

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

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

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

On October 4, 2010, a sixth related derivative complaint was filed in the Superior Court of Washington, County of King, Alexander v. James A. Bianco, et al. (Case No. 10-2-34849-2-SEA). On October 5, 2010, the complaint was removed to the Western District of Washington and assigned to Judge Pechman. On October 29, 2010, nominal defendant Cell Therapeutics, Inc. filed a Notice of Related Case in the lead derivative case, Shackleton v. John H. Bauer, et al., Case No. 2:10-cv-00564 (Doc. No. 42). The Company notified the Court of this action and requested that it be consolidated with the Derivative Actions per the Court s May 10, 2010 Consolidation Order. On November 18, 2010, the Court issued an Order to Show Cause re Consolidation in Alexander. On November 26, 2010, the parties agreed and the court granted consolidation of Alexander and ordered that all proceedings be deferred 60 days pending the outcome of the Defendant s motion to dismiss the Securities Class Action suits. On February 4, 2011, following denial of the motion to dismiss in the securities class action, the Court lifted the stay in the derivative actions. Pursuant to the parties previous stipulation, the parties have agreed to facilitate and coordinate discovery in the derivative and securities actions. Plaintiffs in the derivative action have 45 days following the close of discovery in the securities class action to file an amended complaint. The Court has set a trial date of December 3, 2012 for the shareholder derivative action. The lawsuits are at a preliminary stage in the proceedings. Discovery has commenced in the securities class action. We believe that the securities class action is without merit and intend to defend it vigorously. For the shareholder derivative action, no estimate of a loss, if any, can be made at this time in the event that we do not prevail.

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New Product Acquisition Strategy

On May 26, 2011, we announced that, consistent with our previously announced pipeline strategy, we have identified a potential acquisition opportunity that is a phase II drug candidate being investigated in the field of cancer immunotherapy. As of the date of this prospectus supplement, our discussions are on-going. We are unable to predict the timing or likelihood of reaching a deal with respect to this acquisition.

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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.

Securities we are offering	30,000 shares of Series 13 Preferred Stock and warrants to purchase up to 8,820,000 shares of common stock (and the approximately 26,467,059 shares of common stock issuable from time to time upon conversion of the Series 13 Preferred Stock and exercise of the warrants). The purchase price for each share of Series 13 Preferred Stock and a warrant to purchase 294 shares of common stock is $1,000. Each warrant will have an exercise price of $2.15 per share. The shares of Series 13 Preferred Stock and warrants will be issued separately, but can only be purchased together in this offering.
Description of the Series 13 Preferred Stock Dividends	Holders of the Series 13 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 13 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 13 Preferred Stock of $1,000 per share to be converted by the conversion price, which is initially $1.70. The initial conversion price is subject to adjustment in certain events (including certain fundamental changes), which are explained in more detail under the section entitled Description of Series 13 Preferred Stock.
Automatic conversion	On the first to occur of (i) the one month anniversary of the original issuance date of the Series 13 Preferred Stock, (ii) the date on which 1,000 or less shares of Series 13 Preferred Stock remain outstanding or (iii) the adoption by our board of directors of a resolution that it intends to adopt an amendment to the articles of incorporation without shareholder approval to effect a reverse stock split with respect to our common stock in order to achieve compliance with the listing rules of The NASDAQ Capital Market or for other good faith business reasons, all outstanding shares of Series 13 Preferred Stock shall automatically convert into the number of shares of common stock determined by dividing the aggregate stated value of the Series 13 Preferred Stock being converted by the conversion price then in effect, subject only to the limitations on conversion described below.
Limitations on conversion	We cannot effect a conversion of the Series 13 Preferred Stock, and no holder may request a conversion of its Series 13 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. In addition, in the event of an automatic conversion, the conversion threshold will increase to 19.99% without any further action on the part of a holder.
Liquidation preference	In the event of our voluntary or involuntary dissolution, liquidation or winding up, each holder of Series 13 Preferred Stock will be entitled to be paid a liquidation preference equal to the initial stated value of such holder s Series 13 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 13 Preferred Stock.

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Voting rights	The Series 13 Preferred Stock will have no voting rights, except as otherwise expressly provided in our articles of incorporation or as otherwise required by law. However, so long as at least 20% of the aggregate originally issued shares of the Series 13 Preferred Stock are outstanding, we cannot amend our articles of incorporation, our second amended and restated bylaws, or our bylaws, or other charter documents in each case so as to materially, specifically and adversely affect the rights of the Series 13 Preferred Stock, to repay, repurchase or offer to repay or repurchase or otherwise acquire any of our common stock or other securities junior to the Series 13 Preferred Stock, except in certain limited circumstances, to authorize or create any class of senior preferred stock or to enter into any agreement or understanding with respect to any of the foregoing, in each case without the affirmative written consent of holders of a majority of the outstanding shares of Series 13 Preferred Stock.
Description of the warrants	The Initial Purchasers will receive warrants to purchase 294 shares of common stock for each share of Series 13 Preferred Stock purchased in this offering. The warrants are exercisable at an exercise price of $2.15 per share of common stock. The warrants are exercisable beginning six months and one day after the date of issuance and expire five years and one day after the date of issuance. See Description of Warrants.
Limitations on exercise	No holder may exercise its warrants to the extent that the exercise would result in the holder and its affiliates beneficially owning 4.99% or more of our common stock, provided that a holder may elect to increase the exercise threshold to 9.99% of our common stock by providing us with 61 days prior notice.
Use of proceeds after expenses	We may use a portion of the net proceeds from this offering to fund possible investments in, or acquisitions of, complementary businesses, technologies or products. We have recently engaged in limited discussions with third parties regarding such investments or acquisitions, but we have no current agreements or commitments with respect to any investment or acquisition. We can provide no assurance that we will enter into any such agreements or commitments or consummate any such investments or acquisitions. We may also use a portion of the net proceeds from this offering for general corporate purposes, which may include, among other things, paying interest on and/or retiring portions of our outstanding debt, funding research and development, preclinical and clinical trials, the preparation and filing of new drug applications and general working capital. See Use of Proceeds.
Market for the Series 13 Preferred Stock and warrants	There is no established public trading market for the Series 13 Preferred Stock or warrants and we do not expect a market to develop. In addition, we do not intend to apply for listing the Series 13 Preferred Stock or warrants on any securities exchange.
Market for our common stock	Our common stock is quoted on The NASDAQ Capital Market and on the MTA stock market in Italy under the symbol CTIC. On June 29, 2011, the last reported sale price of our common stock on The NASDAQ Capital Market was $1.96.
Risk factors	See the Risk Factors section contained in this prospectus supplement and in the documents we incorporate by reference in this prospectus supplement and the accompanying prospectus to read about factors you should consider before investing in our securities.

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RISK FACTORS

You should carefully consider the risks under the heading Risk Factors beginning on page 17 of our Annual Report on Form 10-K for the fiscal year ended December 31, 2010, filed with the SEC on February 16, 2011, and our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2011, filed with the SEC on April 26, 2011, which information is incorporated by reference in this prospectus supplement, and the additional risks described below and other information in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference before deciding to invest in our securities. If any of the identified risks actually occur, they could materially adversely affect our business, financial condition, operating results or prospects and the trading price of our securities. Additional risks and uncertainties that we do not presently know or that we currently deem immaterial may also impair our business, financial condition, operating results and prospects and the trading price of our securities.

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, 2011, we had cash and cash equivalents of $43.8 million, which amount does not take into account the approximately $16.0 million in gross proceeds that we subsequently received in May 2011 in connection with the issuance of our Series 12 preferred stock and warrants, and which has not been reduced by the approximately $10.6 million that we subsequently deposited in repayment for our outstanding 7.5% Notes.

As of March 31, 2011, our total current liabilities were $39.1 million, including $10.3 million and $10.9 million outstanding principal balance related to our 7.5% Notes and 5.75% convertible senior notes, or the 5.75% Notes, respectively. On May 2, 2011, we announced that we had deposited $10.6 million in cash as trust funds with U.S. Bank National Association as the trustee of our outstanding 7.5% Notes in repayment for the 7.5% Notes, including accrued and unpaid interest. Our 5.75% Notes mature in December 2011. We do not expect that our existing cash and cash equivalents, as well as proceeds received from our offerings to date, but without giving effect to this offering, will provide sufficient working capital to fund our presently anticipated operations through the fourth quarter of 2011.

Even if we are able to raise additional capital through this offering, we will need to find other ways of raising additional capital, which will likely require that we issue additional shares of our common stock. In light of this offering, and because of the number of shares reserved for issuance under various convertible securities, derivative securities and otherwise, we have very few authorized shares of common stock available for issuance and it is difficult for us to obtain an increase in our authorized shares. If we do not have enough shares authorized to effect a future equity financing, our ability to raise capital through equity financings may be adversely affected.

To the extent that we raise additional capital through this offering or the sale of equity securities or securities convertible into our equity securities, our shareholders will experience dilution of their proportionate ownership of us. In addition to the transactions reflected in this offering, we have held preliminary discussions with several investment funds regarding a potential investment in our company, but we have no current agreements or commitments with respect to any investment by these investment funds or any other investors. There can be no assurance that this offering will be consummated, that our discussions with these investment funds or any other investors will result in an investment in our company or that we will have sufficient earnings, access to liquidity or cash flow in the future to meet our operating expenses and other obligations, including our debt service obligations.

We may not be able to raise such capital or, if we can, it may not be on favorable terms. We may seek to raise additional capital through public or private equity financings, partnerships, joint ventures, dispositions of assets, debt financings or restructurings, bank borrowings or other sources. To obtain additional funding, we may need to enter into arrangements that require us to relinquish rights to certain technologies, drug candidates, products and/or potential markets. In addition, some financing alternatives may require us to meet additional regulatory requirements in Italy and the United States and we may be subject to certain contractual limitations, which may increase our costs and adversely affect our ability to obtain additional funding. If adequate funds are not otherwise available, we will further curtail operations significantly, including the delay, modification or cancellation of operations and

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

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

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

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 $35.0 million. NASDAQ s Listing Qualifications Panel, or the Panel, approved this transfer after our market capitalization did not comply with the minimum market capitalization required for companies listed on The NASDAQ Global Market, and we presented a plan to the Panel for regaining compliance with the NASDAQ Marketplace Rules. On January 23, 2009, we received an Additional Staff Determination Letter from NASDAQ that stated that the 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 determined to continue the listing of our common stock on The NASDAQ Capital Market, subject to the condition that, on or before April 6, 2009, we demonstrated compliance with all applicable standards for continued listing on The NASDAQ Capital Market, including the $35.0 million minimum market capitalization requirement. In addition, the Panel issued a public reprimand for our prior failures to comply with the shareholder approval requirements and late filing of Listing of Additional Shares forms. On April 2, 2009, we were notified by NASDAQ that we had complied with the Panel s decision dated March 6, 2009, and, accordingly, the Panel determined to continue the listing of our common stock on The NASDAQ Capital Market.

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

On May 3, 2011, we received a notice from NASDAQ stating that we had not regained compliance with NASDAQ s $1.00 minimum bid price rule under Rule 5550(a)(2). On May 5, 2011, in an effort to regain compliance with the NASDAQ listing requirements and increase the per-share trading price of our common stock, our board of directors approved a one-for-six reverse stock split. The reverse stock split became effective on May 15, 2011. On June 1, 2011, we announced that we received a letter from NASDAQ indicating that we had regained compliance with Rule 5550(a)(2) and that we were in compliance with all applicable listing standards. As a result, our common stock will continue to be listed and traded on The NASDAQ Capital Market. However, notwithstanding our current compliance with NASDAQ listing standards, there can be no assurance that we will be able to maintain our continued listing on The NASDAQ Capital Market in the future.

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The level of trading activity of our common stock may decline if it is no longer listed on The NASDAQ Capital Market. Furthermore, our failure to maintain a listing on The NASDAQ Capital Market may constitute an event of default under certain of our indebtedness which would accelerate the maturity date of such debt. As such, if our common stock ceases to be listed for trading on The NASDAQ Capital Market for any reason, it may harm our stock price, increase the volatility of our stock price and make it more difficult for investors to sell shares of our common stock. In the event our common stock is delisted from The NASDAQ Capital Market, we currently expect that our common stock would be eligible to be listed on the OTC Bulletin Board or Pink Sheets. We do not know what impact delisting from The NASDAQ Capital Market may have on our listing with the Borsa Italiana. Although we continue to be listed on The NASDAQ Capital Market, trading in our common stock may be halted or suspended due to market conditions or if NASDAQ, CONSOB or the Borsa Italiana determine that trading in our common stock is inadvisable. Trading in our common stock was halted by the Borsa Italiana on February 10, 2009, and, as a consequence, trading in our common stock was also halted by NASDAQ. After we provided CONSOB with additional information and clarification on our business operations and financial condition, as requested, and published a press release containing such information in Italy, the Borsa Italiana, and NASDAQ lifted the trading halts on our common stock. In addition, on March 23, 2009, the Borsa Italiana halted trading of our common stock on the MTA and resumed trading prior to the opening of the MTA the next day after we filed a press release regarding the explanatory paragraph in our auditor s reports on our December 31, 2008 and 2007 consolidated financial statements regarding their substantial doubt as to our ability to continue as a going concern. As a consequence, NASDAQ also halted trading in our common stock on March 23, 2009, but re-initiated trading later that day. Although we file press releases with CONSOB at the end of each month regarding our business and financial condition, CONSOB may make additional inquiries about our business and financial condition at any time, and there can be no guarantee that the Borsa Italiana, CONSOB or NASDAQ will not halt trading in our shares again in the future.

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

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

If we are unable to obtain a quorum at our shareholder meetings and/or fail to get shareholder approval of corporate actions, such failure could harm us. Our articles of incorporation require that a quorum, generally consisting of one-third of the outstanding shares of voting stock, be represented in person or by proxy in order to transact business at a meeting of our shareholders. In addition, amendments to our articles of incorporation, such as an amendment to increase our authorized capital stock, generally require the approval of a majority of our outstanding shares. As a result, there is a risk that we may not get shareholder approval for these amendments, including amendments to increase the number of authorized shares of common stock at a time when we need those shares to effect a future equity financing. If we do not receive shareholder approval for such increase in authorized shares, our ability to raise capital through equity financings will be significantly harmed.

A substantial majority of our common shares are held by Italian institutions and, under Italian laws and regulations, it is difficult to communicate with the beneficial holders of those shares to obtain votes. In 2006, when a quorum required a majority of the outstanding shares of our voting stock be represented in person or by proxy, we scheduled two annual meetings of shareholders, but were unable to obtain a quorum at either meeting. Following that failure to obtain a quorum, we contacted certain depository banks in Italy where significant numbers of shares of our common stock were held and asked them to cooperate by making a book-entry transfer of their share positions at Monte Titoli to their U.S. correspondent bank, who would then transfer the shares to an account of the Italian bank at a U.S. broker-dealer that is an affiliate of that bank. Certain of the banks agreed to make the share transfer pursuant to these arrangements as of the record date of the meeting, subject to the relevant beneficial owner being given notice before such record date and taking no action to direct the voting of such shares. We were able to obtain a quorum to hold special meetings of the shareholders in April 2007, January 2008, March 2009 and June 2011 and annual meetings of the shareholders in September 2007, June 2008, October 2009 and September 2010. Nevertheless, obtaining a quorum at future meetings even at the lower threshold and obtaining necessary shareholder approvals will depend in part upon the willingness of the Italian depository banks to continue participating in the custody transfer arrangements, and we cannot be assured that those banks that have participated in the past will continue to participate in custody transfer arrangements in the future. We are continuing to explore other alternatives to achieve a

quorum for and shareholder representation at our meetings; however, we cannot be certain that we will find an alternate method if we are unable to continue to use the custody transfer arrangements. As a result, we may be unable to obtain a quorum at future annual or special meetings of shareholders or obtain shareholder approval of proposals when needed.

Even if we obtain a quorum at our shareholder meetings, we may not obtain enough votes to approve matters to be resolved upon at those meetings. Under Rule 452 of the New York Stock Exchange, or Rule 452, the U.S. broker-dealer may only vote shares absent direction from the beneficial owner on certain specified routine matters, such as an amendment to our articles of incorporation to increase authorized shares that are to be used for general corporate purposes and the ratification of our auditors. If our shareholders do not instruct their brokers on how to vote their shares on non-routine matters, then we may not obtain the necessary number of votes for approval. Non-routine matters include, for example, proposals that relate to the authorization or creation of indebtedness or preferred stock, and revisions to Rule 452 that further limit matters for which broker discretionary voting is allowed, such as the recent revisions imposed by the Dodd-Frank Act to prohibit broker discretionary voting on matters related to executive compensation and in the election of directors, may further harm our ability to obtain a quorum and shareholder approval of certain matters. Therefore it is possible that even if we are able to obtain a quorum for our meetings of the shareholders, we still may not receive enough votes to approve proxy proposals presented at such meeting and, depending on the proposal in question, including if a proposal is submitted to our shareholders to increase the number of authorized shares of common stock, such failure could harm us. For example, a proposal to approve a reverse stock split failed to receive sufficient votes to pass at the March 2009 shareholders meeting.

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

We were incorporated in 1991 and have incurred a net operating loss every year since our formation. As of March 31, 2011, we had an accumulated deficit of $1.6 billion. We are pursuing regulatory approval for Pixuvri, OPAXIO, tosedostat and brostallicin. We will need to conduct research, development, testing and regulatory compliance activities and undertake manufacturing and drug supply activities the costs of which, together with projected general and administrative expenses, may result in operating losses for the foreseeable future. We may never become profitable even if we are able to commercialize products currently in development or otherwise.

Our debt and operating expenses exceed our net revenues.

We have a substantial amount of debt outstanding, and our annual interest expense with respect to our debt is significant. Unless we raise substantial additional capital and reduce our operating expenses, we may not be able to pay all of our operating expenses or repay our debt or the interest on our debt, liquidated damages or other payments that may become due with respect to our debt. In the event we are unable to reduce our expenses and/or repay our debt or the interest on our debt, we may be required to limit or cease our operations, pursue a plan to sell our operating assets, seek bankruptcy protection, or otherwise modify our business strategy, which could materially harm our future business prospects. Bankruptcy may result in the termination of agreements pursuant to which we license certain intellectual property rights, including the rights to Pixuvri, OPAXIO, tosedostat, brostallicin and bisplatinates.

We may be unable to use our net operating losses.

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

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

As we may need to raise additional financing to fund our operations and satisfy obligations as they become due, our independent registered public accounting firm has included an explanatory paragraph in their reports on our December 31, 2010, 2009 and 2008 consolidated financial statements regarding their substantial doubt as to our ability to continue as a going concern. This may have a negative impact on the trading price of our common stock and we may have a more difficult time obtaining necessary financing.

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

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

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

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

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

In addition, under Italian law, we must publish a listing prospectus that has been approved by CONSOB prior to issuing common stock that exceeds, in any twelve-month period, 10% of the number of shares of our common stock outstanding at the beginning of that period (except for certain applicable exceptions).

If we are unable to maintain a listing prospectus to cover general financing efforts under Italian law, we may be required to raise money using alternative forms of securities. For example, we may need to use convertible preferred stock and convertible debt since the common stock resulting from the conversion of such securities, subject to the provisions of European Directive No. 71/2003 and according to the interpretations of the Committee of European Securities Regulators, is not subject to the 10% limitation imposed by EU and Italian law.

Moreover, on December 10, 2009, CONSOB sent us a notice claiming two violations of the provisions of Section 114, paragraph 1 of the Italian Legislative Decree no. 58/98 due to the asserted late disclosure of certain information then reported, at CONSOB s request, in press releases disseminated on December 19, 2008 and March 23, 2009. Such information concerned, respectively: (i) the conversion by BAM Opportunity Fund LP of 9.66% notes into shares of common stock that occurred between October 24, 2008 and November 19, 2008; and (ii) the contents of the opinion expressed by Stonefield Josephson, Inc., an independent registered public accounting firm, with respect to our 2008 financial statements. The sanctions established by Section 193, paragraph 1 of the Italian Legislative Decree no. 58/98 for such violations are pecuniary administrative sanctions amounting to between 5,000 and 500,000, or approximately $7,000 to $709,000 converted using the currency exchange rate as of March 31, 2011, applicable to each of the two asserted violations. According to the applicable Italian legal provisions, CONSOB may impose such administrative sanctions by means of a decree stating the grounds of its decision only after evaluating our possible defenses that were submitted to CONSOB on January 8, 2010 (within 30 days of December 10, 2009, the notification date of the relevant charges,

according to the applicable Italian rules). On July 12, 2010, CONSOB (a) notified us that it had begun the preliminary investigation for its decision on these administrative proceedings and (b) provided us with a preliminary investigation report in response to our defenses submitted on January 8, 2010. On August 12, 2010 (within 30 days of July 12, 2010, the notification date of the beginning of the aforesaid preliminary investigation, according to the applicable Italian rules), we submitted further defenses that CONSOB would have to evaluate before imposing any possible administrative sanctions. In a letter dated March 10, 2011, CONSOB notified us of a resolution confirming the occurrence of the violation asserted in clause (i) above and applied a fine in the amount of 40,000, or approximately $55,000 converted using the foreign currency exchange rate as of March 10, 2011, which we paid on April 5, 2011. CONSOB has not yet notified us of a resolution with respect to the violation asserted in clause (ii) above, but based on our assessment, we believe the likelihood that a pecuniary administrative sanction will be imposed on the Company for such asserted violation (ii) is probable.

Our assets and liabilities that remain in our Italian branches make us subject to increased risk regarding currency exchange rate fluctuations.

We are exposed to risks associated with the translation of euro-denominated financial results and accounts into U.S. dollars. As long as we continue to have assets and liabilities held in our Italian branches the carrying value of these assets and liabilities will be affected by fluctuations in the value of the U.S. dollar as compared to the euro. Changes in the value of the U.S. dollar as compared to the euro might have an adverse effect on our reported results of operations and financial condition.

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

Our European operations are subject to value added tax, or VAT, which is usually applied to all goods and services purchased and sold throughout Europe. The VAT receivable is $5.6 million and 5.3 million as of March 31, 2011 and December 31, 2010, respectively. On April 14, 2009 and December 21, 2009, the ITA issued notices of assessment to CTI (Europe) based on the ITA s audit of CTI (Europe) s VAT returns for the years 2003 and 2005, respectively. On June 25, 2010, the ITA issued notices of assessment to CTI (Europe) for the years 2006 and 2007 based on similar findings for the 2003 and 2005 assessments. The ITA audits concluded that CTI (Europe) did not collect and remit VAT on certain invoices issued to non-Italian clients for services performed by CTI (Europe). The assessments, including interest and penalties, for the years 2003, 2005, 2006 and 2007 are 0.5 million, 5.5 million, 2.5 million and 0.8 million, or approximately $0.8 million, $7.8 million, $3.6 million and $1.2 million converted using the currency exchange rate as of March 31, 2011, respectively. We believe that the services invoiced were non-VAT taxable consultancy services and that the VAT returns are correct as originally filed. We are vigorously defending ourselves against the assessments both on procedural grounds and on the merits of the case. If the decision of the Tax Court is unfavorable, then we expect to appeal to the higher courts in order to further defend our interests. However, if we are unable to successfully defend ourselves against the assessments issued by the ITA, we may be requested to pay to the ITA an amount ranging from 4.9 million to 9.4 million, or approximately $7.0 million to $13.3 million converted using the currency exchange rate as of March 31, 2011, plus collection fees, notification expenses and additional interest for the period lapsed between the date in which the assessments were issued and the date of effective payment. On February 2, 2011, we paid to the ITA the required deposit in respect of the 2005 VAT in the amount of 1.5 million, or approximately $2.1 million converted using the currency exchange rate as of February 2, 2011. On March 4, 2011, we paid to the ITA the required deposit in respect of the 2006 VAT in the amount of 0.4 million, or approximately $0.6 million converted using the currency exchange rate as of March 4, 2011. Further information pertaining to these cases can be found in this prospectus supplement under Summary Recent Developments and is incorporated by reference herein.

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

Our business is dependent on the performance by third parties of their responsibilities under contractual relationships and if third parties default on their performance of their contractual obligations, we could suffer significant financial losses and operational problems, which could in turn adversely affect our financial performance, cash flows or results of operations and may jeopardize our ability to maintain our operations.

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

We have entered into a License and Co-Development agreement related to OPAXIO and Pixuvri with Novartis pursuant to which Novartis received an exclusive worldwide license for the development and commercialization of OPAXIO and an option to enter into an exclusive worldwide license to develop and commercialize Pixuvri. We will not receive any royalty or milestone payments under this agreement unless Novartis exercises its option related to Pixuvri and we are able to reach a definitive agreement or Novartis elects to participate in the development and commercialization of OPAXIO. Novartis is under no obligation to make such

election and enter into a definitive license agreement or exercise such right and may never do so. In addition, even if Novartis exercises such rights, any royalties and milestone payments we may be eligible to receive from Novartis are subject to the receipt of the necessary regulatory approvals and the attainment of certain sales levels. We may never receive the necessary regulatory approvals and our products may not reach the necessary sales levels to generate royalty or milestone payments even if Novartis elects to exercise its option with regard to Pixuvri and enter into a definitive license agreement or to participate in the development and commercialization of OPAXIO. Novartis has the right under the agreement in its sole discretion to terminate such agreement at any time upon written notice to us.

In the event Novartis does not elect to participate in the development of OPAXIO or Pixuvri, we may not be able to find another suitable partner for the commercialization and development of those products, which may have an adverse effect on our ability to bring those drugs to market. In addition, we would need to obtain a release from Novartis prior to entering into any agreement to develop and commercialize Pixuvri or OPAXIO with a third party. Further information about the status of the regulatory approval for Pixuvri can be found in Risk Factors Risks Related to Our Company We cannot guarantee that we will obtain regulatory approval to manufacture or market any of our drug candidates.

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 ODAC meeting on March 22, 2010, the ODAC panel did not recommend approval of our NDA for Pixuvri. Subsequently, in April 2010, we received a Complete Response Letter from the FDA regarding our NDA for Pixuvri. 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 one additional clinical trial to demonstrate the safety and efficacy of Pixuvri. In December 2010, we filed an appeal with the OND s Center for Drug Evaluation and Research regarding the FDA s April 2010 decision to not approve Pixuvri for relapsed or refractory aggressive NHL. We filed our appeal under the FDA s formal dispute resolution process asking the OND to conclude that PIX301 demonstrated efficacy.

On May 3, 2011, we announced that the OND responded to our December 2010 appeal of the FDA s April 2010 decision to not approve Pixuvri for relapsed or refractory aggressive NHL. In its response, the OND indicated that after considering the data available in the appeal, it does not believe that accelerated approval of our NDA is necessarily out of reach based on a single controlled clinical trial, provided that two key matters can be resolved satisfactorily. First, the circumstances of stopping the PIX301 trial early must be resolved to assure that ongoing results assessment were not dictating the decision to stop. Second, ascertainment of the primary endpoint in the PIX301 study must be determined to have been sound and not subject to bias. The OND also indicated that our request that the OND find that the data in the NDA demonstrate efficacy and return the NDA to the Office of Oncology Drug Products for consideration of safety and other issues was denied because the OND was not able to conclude that efficacy had been demonstrated. However, the OND also did not find that it could be concluded that PIX301 was a failed study, which warranted application of interim analysis statistical thresholds. The OND further indicated that we could re-submit the NDA for a re-review of the safety and efficacy, provided that the two key matters can be resolved satisfactorily.

On June 14, 2011, we announced that we had met with the DODP in a meeting that focused on the documents we proposed to provide regarding the circumstances of stopping the enrollment of PIX301 prior to achieving the original planned patient accrual and the make-up of the new radiology expert panel as well as our plan to address items noted in the FDA s Complete Response Letter. The DODP confirmed that the NDA would be reviewed within six months from the resubmission of the NDA. We anticipate filing the additional information later this year; accordingly, it is possible that we could obtain FDA approval as early as the first half of 2012. However, you should not infer that the aforementioned developments increase the likelihood of FDA approval of the NDA or that the FDA, OND or DODP will not require additional actions or information.

Moreover, the FDA may request that we conduct at least one additional clinical trial to obtain FDA approval of our NDA for Pixuvri and we do not know what this trial will cost or how long it would take to execute this study. In March 2011, we initiated a randomized pivotal trial of Pixuvri for the treatment of relapsed or refractory DLBCL. This clinical trial, referred to as PIX306 or PIX-R, is now open to patient enrollment. PIX-R will compare a combination of Pixuvri plus rituximab to a combination of gemcitabine plus rituximab in patients with relapsed or refractory DLBCL who have received one to three prior lines of therapy. We cannot predict the outcome of PIX-R or whether PIX-R will serve as either a post-marketing commitment trial or as a pivotal trial. We may also need to take additional steps to obtain regulatory approval of Pixuvri. 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 Pixuvri may negatively affect our business, financial condition and results of operations.

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We may be delayed, limited or precluded from obtaining regulatory approval of OPAXIO as a maintenance therapy for advanced stage ovarian cancer.

Our future financial success depends in part on obtaining regulatory approval of OPAXIO. We are currently focusing our development of OPAXIO as a potential maintenance therapy for women with advanced stage ovarian cancer who achieve a complete remission following first-line therapy with paclitaxel and carboplatin. This study, the GOG0212 trial, is under the control of the GOG and is expected to enroll 1,100 patients with 788 patients enrolled as of March 31, 2011. The GOG Data Monitoring Committee plans to conduct an interim analysis of overall survival and, based on feedback provided by the GOG, an interim analysis is currently expected in mid-2012. If successful, we could utilize those results to form the basis of an NDA for OPAXIO. However, prior clinical trials for OPAXIO have not been successful. In March 2005, we announced the results of STELLAR 3, and in May 2005, we announced the results of STELLAR 2 and 4, our phase III clinical trials of OPAXIO in NSCLC. All three trials failed to achieve their primary endpoints of superior overall survival compared to current marketed agents for treating NSCLC. Accordingly, there can be no assurance that the GOG0212 will provide compelling evidence or any positive results, which would preclude our planned submission of an NDA to the FDA. In addition, we cannot predict the outcome of the GOG0212 study and that study may not demonstrate or be adequate to support regulatory approval of OPAXIO by the FDA.

In March 2008, we submitted an MAA to the EMA for first-line treatment of patients with advanced NSCLC who are poor performance status, or PS2, based on a non-inferior survival and improved side effect profile which we believe was demonstrated in our previous clinical trials. The application was based on a positive opinion we received from the SAWP; the EMA agreed that switching the primary endpoint from superiority to non-inferiority is feasible if the retrospective justification provided in the marketing application is adequate. In September 2009, we notified the EMA of our decision to withdraw the MAA and we refocused our resources on the approval of OPAXIO for its potential superiority indication in maintenance therapy for ovarian cancer and as a radiation sensitizer in the treatment of esophageal cancer.

We are subject to extensive government regulation.

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

Our products may not be marketed in the United States until they have been approved by the FDA and may not be marketed in other countries until they have received approval from the appropriate agencies. None of our current product candidates have received approval for marketing in any country. On April 13, 2009, we began submission of a rolling NDA to the FDA for Pixuvri to treat relapsed or refractory aggressive NHL. We completed the submission in June 2009 and as announced on April 9, 2010, we received a Complete Response Letter from the FDA regarding our NDA for Pixuvri. 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 trial to demonstrate the safety and effectiveness of Pixuvri. In December 2010, we filed an appeal with the OND s Center for Drug Evaluation and Research regarding the FDA s April 2010 decision to not approve Pixuvri for relapsed or refractory aggressive NHL. We filed our appeal under the FDA s formal dispute resolution process asking the OND to conclude that PIX301 demonstrated efficacy.

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Obtaining regulatory approval requires substantial time, effort and financial resources, and we may not be able to obtain approval of any of our products on a timely basis, or at all. In addition, data obtained from preclinical and clinical trials are susceptible to varying interpretations, and government regulators and our collaborators may not agree with our interpretation of our clinical trial results. If our products are not approved quickly enough to provide net revenues to defray our debt and operating expenses, our business, financial condition and results of operations will be adversely affected.

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

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

The marketing and promotion of pharmaceuticals is also heavily regulated, particularly with regard to prohibitions on the promotion of products for off-label uses. In April 2007, we paid a civil penalty of $10.6 million and entered into a settlement agreement with the United States Attorney s Office for the Western District of Washington arising out of their investigation into certain of our prior marketing practices relating to TRISENOX, which was divested to Cephalon Inc. in July 2005. As part of that settlement agreement and in connection with the acquisition of Zevalin, we also entered into a corporate integrity agreement with the Office of Inspector General of the U.S. Department of Health and Human Services, which required us to establish a compliance committee and compliance program and adopt a formal code of conduct.

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

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

If we are successful in bringing Pixuvri to market, Pixuvri will face competition from currently marketed anthracyclines, such as mitoxantrone (Novantrone®), and new anti-cancer drugs with reduced toxicity that may be developed and marketed.

If we are successful in bringing OPAXIO to market, we will face direct competition from oncology-focused multinational corporations. OPAXIO will compete with other taxanes. Many oncology-focused multinational corporations currently market

or are developing taxanes, epothilones, and other cytotoxic agents, which inhibit cancer cells by a mechanism similar to taxanes, or similar products. Such corporations include, among others, Bristol-Myers Squibb Co. and others, which market paclitaxel and generic forms of paclitaxel; Sanofi-Aventis, which markets docetaxel; Genentech, Roche and OSI Pharmaceuticals, which market Tarceva ; Genentech and Roche, which market Avastin ; Eli Lilly, which markets Alimta® and Abraxis, which markets Abraxane . In addition, other companies such as NeoPharm Inc. and Telik, Inc. are also developing products, which could compete with OPAXIO.

If we are successful in bringing tosedostat to market, we will face direct competition from oncology-focused multinational corporations including Eisai, Sanofi-Aventis, Celgene, and others. Currently some generic compounds are also available which may be used in treating conditions where tosedostat may have application, this could result in additional competitive pressure on price and volume. Additionally there are other products in development for AML from both large and small pharmaceutical companies which may compete with tosedostat.

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

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

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

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

challenging the prices charged for health care products and services;

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

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

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

denying coverage altogether.

The continuing efforts of government and insurance companies, health maintenance organizations and other payers of healthcare costs to contain or reduce costs of health care may affect our future revenues and profitability, and the future revenues and profitability of our potential customers, suppliers and collaborative partners and the availability of capital. In the United States, given the comprehensive health care reform legislation that the President signed into law on March 23, 2010, under the Patient Protection and Affordable Care Act (HR 3590), or the PPACA, the U.S. Congress and state legislatures will likely continue to focus on health care reform, the cost of healthcare services and products and on the reform of the Medicare and Medicaid systems. While we cannot predict whether any such legislative or regulatory proposals will be adopted, the announcement or adoption of these proposals could significantly influence the purchase of healthcare services and products, resulting in lower prices and reducing demand for our products. In addition, in almost all European markets, pricing and choice of prescription

pharmaceuticals are subject to governmental control. Therefore, the price of our products and their reimbursement in Europe will be determined by national regulatory authorities.

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

If users of our products are unable to obtain adequate reimbursement from third-party payers, or if new restrictive legislation is adopted, market acceptance of our products may be limited and we may not achieve anticipated revenues.

Our ability to commercialize our products will depend in part on the extent to which appropriate reimbursement levels for the cost of our products and related treatment are obtained by governmental authorities, private health insurers and other organizations, such as health maintenance organizations, or HMOs. Third-party payers are increasingly challenging the prices charged for medical care. Also, the trend toward managed health care in the United States and the concurrent growth of organizations such as HMOs, which could control or significantly influence the purchase of health care services and products, as well as legislative proposals to further reform health care or reduce government insurance programs, may all result in lower prices for our products if approved for commercialization. The cost containment measures that health care payers and providers are instituting and the effect of any health care reform could materially harm our ability to sell our products at a profit.

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

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

agreement, we may lose our right to market and sell any products based on the licensed technology.

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We hold rights under numerous patents that protect inventions originating from our research and development, and the expiration of any one or more of these patents may allow our competitors to copy the inventions that are currently protected.

We dedicate significant resources to protecting our intellectual property, which is important to our business. We have filed numerous patent applications in the U.S. and various other countries seeking protection of inventions originating from our research and development and we have also obtained rights to various patents and patent applications under licenses with third parties. Patents have been issued on many of these applications. We have issued patents pending or issued in the U.S. and foreign countries directed to Pixuvri, OPAXIO, brostallicin and other product candidates. However, the lives of these patents are limited. Patents for the individual products extend for varying periods according to the date of the patent filing or grant and the legal term of patents in the various countries where patent protection is obtained. The Pixuvri-directed patents will expire in 2014; the OPAXIO-directed patents will expire on various dates ranging from 2017 through 2018; and the brostallicin-directed patents will expire on various dates ranging from 2017 to 2023. Although such patent expiration ranges are only for U.S. issued patents and do not account for potential extensions that may be available in certain countries (for example, certain Pixuvri-directed patents may be subject to possible patent-term extensions that could provide extensions through 2019 in the U.S. and 2021 in Europe), there can be no assurance that such extensions will be obtained. The expiration of these patents may allow our competitors to copy the inventions that are currently protected and better compete with us.

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 actions and shareholder derivative lawsuits filed in the U.S. District Court for the Western District of Washington. These securities class action lawsuits are brought on behalf of a putative class of purchasers of our securities from March 25, 2008 through March 22, 2010, and seek unspecified damages. All of the purported securities class actions have been consolidated into one securities class action, a lead plaintiff has been appointed, and a consolidated amended complaint has been filed. The defendants filed a motion to dismiss the consolidated amended complaint on October 27, 2010. Plaintiffs filed their opposition to the motion on December 3, 2010, and the defendants filed their reply on December 22, 2010. The motion was heard on January 28, 2011. On February 4, 2011, the court issued an order denying in large part the defendants motion. Defendants have answered and filed affirmative defenses to the Complaint s claims. The court has set a trial date of June 25, 2012 for the securities class action. The currently filed shareholder derivative lawsuits have also been consolidated into one derivative action and co-lead plaintiffs have been appointed. The court ordered the derivative action stayed pending the outcome of the defendants motion to dismiss in the securities class action. On February 4, 2011, the court lifted the stay. The parties to that action have negotiated a schedule to coordinate activity in that matter with that in the class action discussed above. The Court has set a trial date of December 3, 2012 for the shareholder 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.

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

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

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

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

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The patent position of biopharmaceutical firms generally is highly uncertain and involves complex legal and factual questions. The U.S. Patent and Trademark Office has not established a consistent policy regarding the breadth of claims that it will allow in biotechnology patents. If it allows broad claims, the number and cost of patent interference proceedings in the United States and the risk of infringement litigation may increase. If it allows narrow claims, the risk of infringement may decrease, but the value of our rights under our patents, licenses and patent applications may also decrease. Patent applications in which we have rights may never issue as patents and the claims of any issued patents may not afford meaningful protection for our technologies or products. In addition, patents issued to us or our licensors may be challenged and subsequently narrowed, invalidated or circumvented. Litigation, interference proceedings or other governmental proceedings that we may become involved in with respect to our proprietary technologies or the proprietary technology of others could result in substantial cost to us. Patent litigation is widespread in the biotechnology industry, and any patent litigation could harm our business. Costly litigation might be necessary to protect a patent position or to determine the scope and validity of third-party proprietary rights, and we may not have the required resources to pursue any such litigation or to protect our patent rights. Any adverse outcome in litigation with respect to the infringement or validity of any patents owned by third parties could subject us to significant liabilities to third parties, require disputed rights to be licensed from third parties or require us to cease using a product or technology.

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

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

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

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

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

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

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

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

We may not be able to obtain the raw materials necessary to produce tosedostat. We currently do not have a firm to manufacture the commercial drug product and drug substance. Should we be unable to identify, negotiate and contract with a manufacturing firm for the commercial drug product and drug substance in sufficient quantity or quality, or should a contracted supplier fail to deliver in a timely fashion or at all, or should these relationships, if any, terminate, we may not be able to qualify and obtain a sufficient supply on acceptable terms, or at all.

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

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

We will be dependent upon these third parties to supply us in a timely manner with products manufactured in compliance with cGMPs or similar manufacturing standards imposed by United States and/or foreign regulatory authorities where our products will be tested and/or marketed. While the FDA and other regulatory authorities maintain oversight for cGMP compliance of drug manufacturers, contract manufacturers and contract service providers may at times violate cGMPs. The FDA and other regulatory authorities may take action against a contract manufacturer who violates cGMPs. Failure to comply with FDA, EMA or other applicable regulations may cause us to curtail or stop the manufacture of such products until we obtain regulatory compliance.

In addition, one of our other products under development, OPAXIO, has a complex manufacturing process and supply chain, which may prevent us from obtaining a sufficient supply of drug product for the clinical trials and commercial activities currently planned or underway on a timely basis, if at all. The active pharmaceutical ingredients and drug products for Pixuvri and brostallicin are both manufactured by a single vendor. Finished product manufacture and distribution for both Pixuvri and brostallicin are to be manufactured and distributed by different single vendors. We are currently disputing our right to cancel the exclusive manufacturing contract between us and the former manufacturer of Pixuvri. We assert multiple grounds for terminating this exclusive manufacturing agreement, which the former manufacturer disputes. The former manufacturer has asserted that we do not have the right to terminate the manufacturing contracts and has filed a lawsuit in the Court of Milan to compel us to source Pixuvri from that manufacturer. A hearing was held on January 21, 2010 to discuss preliminary matters and set a schedule for future filings and hearings. On November 11, 2010 a hearing was held aimed at examining and discussing the requests for evidence submitted by the parties in the briefs filed pursuant to article 183, paragraph 6 of the Italian code of civil procedure. At the hearing of November 11, the judge declared that the case does not require any discovery or evidentiary phase, as it may be decided on the basis of the documents and pleadings filed by the parties. The judge fixed accordingly the last hearing for October 11, 2012, for the parties to definitively submit to the judge their requests.

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

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

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

- be found ineffective or cause harmful side effects during preclinical testing or clinical trials;
- fail to receive necessary regulatory approvals;
- be difficult to manufacture on a scale necessary for commercialization;

be uneconomical to produce;

fail to achieve market acceptance; or

be precluded from commercialization by proprietary rights of third parties.

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

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

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

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

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

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

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

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

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

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

- we may not obtain authorization to permit product candidates that are already in the preclinical development phase to enter the human clinical testing phase;
- the FDA or the EMA may object to proposed protocols;

there may be shortages of available product supplies or the materials that are used to manufacture the products;

the quality or stability of the product candidates may fall below acceptable standards;

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

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

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

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

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

- the rates of patient recruitment and enrollment of patients who meet trial eligibility criteria may be lower than anticipated, which is a function of many factors, including the number of patients with the relevant conditions, the nature of the clinical testing, the proximity of patients to clinical testing centers, the eligibility criteria for tests as well as competition with other clinical testing programs involving the same patient profile but different treatments.

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

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

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

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

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

- collaborative arrangements may not be on terms favorable to us;

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

The unfavorable outcome of litigation and other claims against us could harm our financial condition and results of operations.

We are subject to a variety of claims and lawsuits from time to time, some of which arise in the ordinary course of our business. Adverse outcomes in some or all of such pending cases may result in significant monetary damages or injunctive relief against us. While we currently believe that resolution of these matters, individually or in the aggregate, will not have a material

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adverse impact on our financial position, results of operations or trading price of our securities, the ultimate outcome of litigation and other claims is subject to inherent uncertainties, and our view of these matters may change in the future. It is possible that our financial condition and results of operations could be harmed in any period in which the effect of an unfavorable final outcome becomes probable and reasonably estimable.

Our financial condition and results of operations could be adversely affected by public health issues, wars and other military action, as well as terrorist attacks and threats and government responses thereto, especially if any such actions were directed at us or our facilities or customers.

Public health issues, terrorist attacks in the United States and elsewhere, government responses thereto, and military actions in Iraq, Afghanistan and elsewhere, may disrupt our operations or those of our customers and suppliers and may affect the availability of materials needed to manufacture our products or the means to transport those materials to manufacturing facilities and finished products to customers. A health pandemic could cause damage or disruption to international commerce by creating economic and political uncertainties that may have a strong negative impact on the global economy, us, and our customers or suppliers. Should a severe public health issues arise, we could be negatively impacted by the need for more stringent employee travel restrictions, additional limitations in the availability of freight services, governmental actions limiting the movement of products between various regions and disruptions in the operations of our customers or suppliers. The long-term effects public health issues, the terrorist attacks, and the ongoing war on terrorism on our business and on the global economy remain unknown. In addition, any of these events could increase volatility in the United States and world financial markets which may depress the price of our common stock and may limit the capital resources available to us or our customers or suppliers, which could result in decreased orders from customers, less favorable financing terms from suppliers, and scarcity or increased costs of materials and components of our products. Additionally, terrorist attacks directly upon us may significantly disrupt our ability to conduct our business. Any of these occurrences could have a significant impact on our operating results, revenues and costs and may result in increased volatility of the trading price of our securities.

Higher health care costs could adversely affect our business.

We will be impacted by the recent passage of the PPACA. Under the PPACA, we may be required to amend our health care plans to, among other things, provide affordable coverage, as defined in the PPACA, to all employees, or otherwise be subject to a payment per employee based on the affordability criteria in the Act: cover adult children of our employees to age 26; delete lifetime limits; and delete pre-existing condition limitations. Many of these requirements will be phased in over a period of time. Additionally, some states and localities have passed state and local laws mandating the provision of certain levels of health benefits by some employers. Increased health care costs could harm our business, financial condition and results of operations.

Risks Related to this Offering

There is no public market for the Series 13 Preferred Stock or warrants being offered in this offering.

There is no established public trading market for the Series 13 Preferred Stock or warrants being offered in this offering, and we do not expect a market to develop. In addition, we do not intend to apply for listing of the Series 13 Preferred Stock or warrants on any securities exchange. Without an active market, the liquidity of the Series 13 Preferred Stock and warrants will be limited.

Purchasers of Series 13 Preferred Stock and warrants who convert their shares of Series 13 Preferred Stock into common stock or exercise their warrants for shares common stock will incur immediate dilution.

Upon conversion or exercise of your shares of Series 13 Preferred Stock or warrants, as the case may be, you will experience immediate and substantial dilution because the per share conversion price of your shares of Series 13 Preferred Stock and the exercise price of your warrants will be higher than the net tangible book value per share of the outstanding common stock immediately after this offering. In addition, you will experience dilution when we issue additional shares of common stock that we are permitted or required to issue under outstanding options and warrants and under our stock option plan or other employee or director compensations plans.

Holders of our Series 13 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 or exercise of the Series 13 Preferred Stock and warrants, as the case may be, you will have no rights with respect to our common stock, other than the right of the convertible preferred stock to receive dividends equal to and in the same term as dividends actually paid on common stock, including rights to vote or respond to tender offers. Upon conversion or exercise of your Series 13 Preferred Stock or warrants, as the case may be, you will be entitled to exercise the rights of a holder of common stock only as to matters for which the record date occurs after the conversion or exercise date.

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

We may use a portion of the net proceeds from this offering to fund possible investments in, or acquisitions of, complementary businesses, technologies or products. We may also use a portion of the net proceeds from this offering for general corporate purposes. See Use of Proceeds. We have not allocated specific amounts of the net proceeds from this offering for any specific purpose. Accordingly, our management will have significant flexibility in applying the net proceeds of this offering. You will be relying on the judgment of our management with regard to the use of these net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. It is possible that the net proceeds will be invested in a way that does not yield a favorable, or any, return for our company. The failure of our management to use such funds effectively could have a material adverse effect on our business, financial condition, operating results and cash flow.

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 the Series 13 Preferred Stock and any other preferred stock that we may issue in the future, to our indebtedness and to all creditor claims and other non-equity claims against us and our assets available to satisfy claims on us, including claims in a bankruptcy or similar proceeding. Our existing and future indebtedness and our preferred stock may restrict payment of dividends on our common stock.

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

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

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

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

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 12-month period ended June 28, 2011, our stock price has ranged from a low of $1.26 to a high of $3.30 (as adjusted to reflect the one-for-six reverse stock split effected on May 15, 2011). Fluctuations in the trading price or liquidity of our common stock may adversely affect the value of your investment in our common stock.

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

- announcements by us or others of results of preclinical testing and clinical trials and regulatory actions;
- announcements of technological innovations or new commercial therapeutic products by us, our collaborative partners or our present or potential competitors;
- our issuance of additional debt, equity or other securities, which we need to pursue in 2011 to generate additional funds to cover our current debt and operating expenses;
- our quarterly operating results;
- developments or disputes concerning patent or other proprietary rights;
- developments in our relationships with collaborative partners;
- acquisitions or divestitures;
- litigation and government proceedings;
- adverse legislation, including changes in governmental regulation;
- third-party reimbursement policies;
- changes in securities analysts recommendations;
- short selling;
- changes in health care policies and practices;
- halting or suspension of trading in our common stock by NASDAQ, CONSOB or the Borsa Italiana;
- economic and other external factors; and

general market conditions.

In the past, following periods of volatility in the market price of a company s securities, securities class action litigation has often been instituted. For example, in the case of our company, we and certain of our officers and directors are named as defendants in purported securities class action and shareholder derivative lawsuits brought on behalf of a putative class of purchasers of our securities from March 25, 2008 through March 22, 2010. These lawsuits seek unspecified damages and, as with any litigation proceeding, we cannot predict with certainty the eventual outcome of pending litigation. Furthermore, we may have to incur substantial expenses in connection with these lawsuits and our management s attention and resources could be diverted from operating our business as we respond to the litigation. We maintain significant insurance to cover these risks for us and our directors and officers, but our insurance is subject to high deductibles to reduce premium expense, and there is no guarantee that the insurance will cover any specific claim that we currently face or may face in the future, or that it will be adequate to cover all potential liabilities and damages.

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

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

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

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USE OF PROCEEDS

We estimate that the net proceeds of this offering, after deducting placement agent fees and our estimated offering expenses, and excluding the proceeds, if any, from the exercise of the warrants issued in this offering, will be approximately $27.9 million.

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

We may also use a portion of the net proceeds from this offering for general corporate purposes, which may include, among other things, paying interest on and/or retiring portions of our outstanding debt, funding research and development, preclinical and clinical trials, the preparation and filing of new drug applications and general working capital. As of May 31, 2011, our outstanding indebtedness that we may retire, in whole or in part, with the net proceeds from this offering includes our approximately $10.9 million 5.75% Notes, which mature on December 15, 2011.

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

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DETERMINATION OF OFFERING PRICE

Prior to this offering, there was no public market for the Series 13 Preferred Stock or warrants. The terms and conditions of the Series 13 Preferred Stock, including the dividend rate and the conversion price, and the warrants, including the exercise price, were determined by negotiation by us and the placement agent. The principal factors considered in determining these terms and conditions include:

- the market price of our common stock;
- the information set forth in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein, and otherwise available to the placement agent;
- our history and prospects and the history of, and prospects for, the industry in which we compete;
- our past and present financial performance and an assessment of our management;
- our prospects for future earnings and the present state of our development;
- the general condition of the securities markets at the time of this offering;
- the recent market prices of, and demand for, publicly traded common stock of generally comparable companies; and
- other factors deemed relevant by the placement agent and us.

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 March 31,	Year ended December 31,				
	2011	2010	2009	2008	2007	2006
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, 2011, and for the years ended December 31, 2010, 2009, 2008, 2007 and 2006, were insufficient to cover fixed charges, and fixed charges and preferred stock dividends, by $51.0, $147.6, $116.8, $202.9, $148.3 and $135.8 (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.

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DESCRIPTION OF SERIES 13 PREFERRED STOCK

The material terms and provisions of the Series 13 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 13 Preferred Stock set forth in the articles of amendment to our articles of incorporation to be filed as an exhibit to our Current Report on Form 8-K which we expect to file with the SEC in connection with this offering.

Rank

The Series 13 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 13 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 13 Preferred Stock except for repurchases of up to 5,000,000 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 13 Preferred Stock are entitled to receive dividends on shares of the Series 13 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 13 Preferred Stock shall increase the stated value of the Series 13 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 13 Preferred Stock will be entitled to receive the stated value of such holder s shares of Series 13 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 13 Preferred Stock then outstanding, the assets to be distributed to the holders of the Series 13 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 13 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 13 Preferred Stock being converted by the conversion price then in effect. The initial conversion price is $1.70 and is subject to adjustment as described below. This right to convert is limited by the beneficial ownership limitation described below.

Automatic Conversion

On the first to occur of (i) the one month anniversary of the original issuance date of the Series 13 Preferred Stock, (ii) the date on which 1,000 or less shares of Series 13 Preferred Stock remain outstanding or (iii) the adoption by our board of directors of a resolution that it intends to adopt an amendment to our articles of incorporation without shareholder approval to effect a reverse stock split with respect to our common stock in order to achieve compliance with the listing rules of The NASDAQ Capital Market or for other good faith business reasons, all outstanding shares of Series 13 Preferred Stock shall automatically convert into the number of registered shares of common stock determined by dividing the aggregate stated value of the Series 13 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

We may not effect a conversion, and no holder may request conversion, of the Series 13 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. In addition, in the event of an automatic conversion, the conversion threshold will increase to 19.99% without any further action on the part of a holder. The amount of beneficial ownership of a holder and its affiliates will be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations of that section.

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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 13 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 13 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 in which the Company is not the surviving entity;
- the sale of all or substantially all of the assets of the Company in one transaction or a series of related transactions (provided, however, that a fundamental transaction shall not include the Company s entering into a license or other agreement that licenses any intellectual property to an unaffiliated and unrelated person so long as the Company and its subsidiaries continue to have bona fide, substantial and continuing business operations and activities after such license or other agreement is entered into);
- any tender offer or exchange offer allowing holders of common stock to tender or exchange their shares for cash, property or securities, regardless of who makes such offer; or
- any reclassification of common stock or any compulsory share exchange by which common stock is effectively converted into or exchanged for other securities, cash or property.

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

Voting Rights

The Series 13 Preferred Stock shall have no voting rights, except to the extent expressly provided in our articles of incorporation or as otherwise required by law. However, so long as at least 20% of the aggregate initially issued shares of Series 13 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 13 Preferred Stock:

amend our articles of incorporation, bylaws or other charter documents in each case so as to materially, specifically and adversely affect the rights of any holder with respect to the Series 13 Preferred Stock;

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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 13 Preferred Stock, except the repurchase of up to 5,000,000 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.

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DESCRIPTION OF WARRANTS

The material terms and provisions of the warrants being offered pursuant to this prospectus supplement and the accompanying prospectus are summarized below. This summary is subject to, and qualified in its entirety by, the terms set forth in the Common Stock Purchase Warrant to be filed as an exhibit to our Current Report on Form 8-K, which we expect to file with the SEC in connection with this offering.

General

The warrants are exercisable beginning six months and one day after the date of issuance and will expire five years and one day after the date of issuance. The warrants will be exercisable, at the option of the holder, upon the surrender of the warrants to us and the payment in cash of the exercise price of the shares of common stock being acquired upon exercise of the warrants. However, if at the time of exercise there is no effective registration statement registering the issuance of the shares of common stock issuable upon exercise of the warrants to the holder and all such shares are not then registered for resale by the holder, the holder may exercise the warrants by means of a cashless exercise or net exercise. The warrants will not be listed on any national securities exchange.

The exercise price per share of common stock purchasable upon exercise of the warrants is $2.15 per share of common stock being purchased. The exercise price is subject to appropriate adjustment in the event of stock dividends, stock splits, reorganizations or similar events affecting our common stock. The holders of the warrants are entitled to 20 days notice before the record date for certain distributions to holders of our common stock. If certain fundamental transactions occur, such as a merger, consolidation, sale of substantially all of our assets, tender offer or exchange offer with respect to our common stock or reclassification of our common stock, the holders of the warrants will be entitled to receive thereafter in lieu of our common stock, the consideration (if different from common stock) that the holders of the warrants would have been entitled to receive upon the occurrence of the fundamental transaction as if the warrant had been exercised immediately before the fundamental transaction. If any holder of common stock is given a choice of consideration to be received in the fundamental transaction, then the holders of the warrants shall be given the same choice upon the exercise of the warrants following the fundamental transaction.

As of June 28, 2011, other warrants to purchase approximately 18.4 million shares of common stock were outstanding.

Beneficial Ownership Limitation

No holder may exercise its warrants to the extent that the exercise would result in the holder and its affiliates beneficially owning 4.99% or more of our common stock, provided that a holder may elect to increase the exercise threshold to 9.99% by providing us with 61 days prior notice. The amount of beneficial ownership of the holder and its affiliates will be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations of that section.

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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 articles of incorporation, our bylaws and all applicable provisions of Washington law.

General

We are authorized to issue 283,333,333 shares of common stock, no par value (as adjusted to reflect the one-for-six reverse stock split effected on May 15, 2011), and 1,666,666 shares of preferred stock, no par value. As of June 28, 2011, there were 175,224,525 shares of common stock outstanding, warrants to purchase approximately 18.4 million shares of common stock outstanding and no shares of preferred stock outstanding.

On April 15, 2007, we effected a one-for-four reverse stock split of our common stock, on August 31, 2008, we effected a one-for-ten reverse stock split of our common stock and, on May 15, 2011, we effected a one-for-six reverse stock split of our common stock.

Common Stock

Each holder of common stock is generally 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 could 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 generally as a person or group of persons who acquire 10% or more of our voting securities) for a period of five years following the acquiring person s share acquisition date. The prohibited transactions include, among others, a merger or consolidation with, disposition of assets to, or issuance or redemption of stock to or from, the acquiring person, or any other receipt by the acquiring person of 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 outstanding shares entitled to vote on the transaction, not counting shares as to

which the acquiring person has beneficial ownership or voting control, transactions approved by the board of directors prior to the acquiring person first becoming an acquiring person or a merger, share exchange, consolidation, liquidation, distribution or certain other significant business transactions entered into with the acquiring person where certain requirements regarding the fairness of the consideration to be received by the shareholders have been met. We may not exempt ourselves from coverage of this statute. These statutory provisions may have the effect of delaying, deterring or preventing a change in control of the Company.

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Our board of directors is divided into three approximately equal classes of directors serving staggered three-year terms. In addition, our 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 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 articles of incorporation or bylaws or a contract with us. Further, our 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 provisions may have the effect of deterring hostile takeovers or delaying a change in control of our management.

On December 28, 2009, we entered into our rights plan, with Computershare Trust Company, N.A., as rights agent. 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. As adjusted in connection with our one-for-six reverse stock split effected on May 15, 2011, each right, if and when it becomes exercisable, will entitle the holder to purchase six ten-thousandths of a share of a new series of junior participating cumulative preferred stock for $36.00, subject to standard adjustment in the rights plan. Upon the acquisition of 20% or more of our common stock by a person or group, subject to certain exceptions (such acquisition referred to herein as a 20% acquisition), the rights will become exercisable for our preferred stock, except for those rights held by such 20% acquirer, which will become null and void. Upon a 20% acquisition, the holder of an exercisable right will be entitled to receive, upon exercise, in lieu of preferred stock, that number of shares of our common stock, or in certain circumstances, including if there are insufficient shares of our common stock to permit the exercise in full of the rights, preferred stock, other securities, cash, property or a reduction in the exercise price of the rights, or any combination of the foregoing, having a market value of two times the exercise price of the right.

If we are acquired in a merger, consolidation or certain other business combination transactions after a 20% acquisition, each holder of an exercisable right would then have the right to receive, upon exercise, common stock of the acquiring company having a market value equal to two times the exercise price of the right.

Our board of directors may redeem the rights for $0.0006 per right or amend the rights plan at any time prior to a 20% acquisition or the expiration of the rights plan. The rights plan will expire on January 7, 2013, unless previously redeemed or exchanged by the Company.

Transfer Agent and Registrar

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

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PLAN OF DISTRIBUTION

We are offering through Rodman & Renshaw, LLC, who acted as our sole placement agent in connection with this offering, or the placement agent, 30,000 shares of Series 13 Preferred Stock and warrants to purchase up to 8,820,000 shares of common stock (and the approximately 26,467,059 shares of common stock issuable from time to time upon conversion of the Series 13 Preferred Stock and exercise of the warrants). The purchase price for each share of Series 13 Preferred Stock and a warrant to purchase 294 shares of common stock is $1,000. In connection with this offering, we will pay fees to the placement agent. The placement agent will be working solely on a reasonable best efforts basis and, other than the purchase of 3,000 shares of the Series 13 Preferred Stock and warrants for its own account, and for the account of others, on the same terms and conditions as all other Initial Purchasers in this offering, is not purchasing or selling any securities offered by this prospectus supplement or the accompanying prospectus, nor is it required to arrange for the purchase and sale of any specific number or dollar amount of securities. Therefore, we may not sell the entire amount of Series 13 Preferred Stock and warrants offered pursuant to this prospectus supplement.

We currently anticipate that closing of the sale of Series 13 Preferred Stock and warrants will occur on July 5, 2011.

On June 29, 2011, we entered into a letter agreement with the placement agent to serve as exclusive placement agent for purchasers of our securities for a period of 10 days. Pursuant to the letter agreement, we will pay the placement agent at closing a cash fee equal to 5% of the aggregate proceeds raised in this offering, plus warrants to purchase shares of common stock in an amount equal to 2% of the aggregate number of shares of common stock issuable upon conversion of the Series 13 Preferred Stock with an exercise price of $2.45 per share. The following table shows the per share of Series 13 Preferred Stock and warrant total fees we will pay to the placement agent assuming all of the Series 13 Preferred Stock and warrants offered by this prospectus supplement are issued and sold by us.

Placement Agent Fees	Per share of Series 13 Preferred Stock and warrants	Total
Offering price of the Series 13 Preferred Stock and warrants	$ 50	$ 1,500,000

Because there is no minimum offering amount required as a condition to closing, the actual total may be less than the total set forth above.

We have also agreed to pay or reimburse the placement agent for expenses incurred in connection with the offering, up to the lesser of $25,000 or 1.6% of the aggregate gross proceeds received by us in this offering. The estimated offering expenses payable by us, excluding the placement agency fee, are $570,000, which include legal, accounting and printing costs, and various other fees associated with registering and listing the shares of common stock issuable from time to time upon conversion of the Series 13 Preferred Stock or exercise of the warrants. The estimated offering expenses will also include a cash fee of 1% of the aggregate proceeds raised in this offering, plus warrants to purchase shares of common stock in an amount equal to 1% of the aggregate number of shares of common stock issuable upon conversion of the Series 13 Preferred Stock with an exercise price of $2.45 per share, payable at closing to Trout Capital LLC for financial advisory services.

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

We have also entered into a purchase agreement with the placement agent and the other Initial Purchasers with respect to the Series 13 Preferred Stock and warrants offered hereby. The securities purchased by Rodman & Renshaw, LLC may be offered and sold by Rodman & Renshaw, LLC from time to time as market conditions permit, or otherwise, at prices and terms then prevailing or at prices related to the then-current market price, or in negotiated transactions. These securities may be sold pursuant to this prospectus supplement and the accompanying prospectus by one or more of the following methods, without limitation:

- a block trade;
- ordinary brokerage transactions and transactions in which Rodman & Renshaw, LLC solicits purchasers;

agreements with third parties to purchase securities entered into on the date of this offering; and

negotiated transactions between Rodman & Renshaw, LLC and subsequent purchasers.

When making sales of its securities, Rodman & Renshaw, LLC may arrange for other brokers or dealers to participate. These brokers or dealers may receive commissions or discounts from Rodman & Renshaw, LLC in amounts to be negotiated. Each such broker-dealer or agent may be deemed an underwriter within the meaning of Section 2(a)(11) of the Securities Act. If the securities are sold through broker-dealers, Rodman & Renshaw, LLC will be responsible for applicable discounts or commissions. Rodman & Renshaw, LLC also will pay any other expenses associated with the sale of our securities it acquires pursuant to the purchase agreement.

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

- may not engage in any stabilization activity in connection with our securities;
- must furnish each broker which offers securities covered by this prospectus supplement and the accompanying prospectus with the number of copies of this prospectus supplement and the accompanying prospectus that are required by each broker; and
- may not bid for or purchase any of our securities or attempt to induce any person to purchase any of our securities, other than as permitted under the Exchange Act, until it has completed its participation in the distribution.

The placement agent has informed us that it does not intend to engage in overallotment, stabilizing transactions or syndicate covering transactions in connection with this offering.

A prospectus supplement and the accompanying prospectus in electronic format may be made available on the websites maintained by the placement agent, and the placement agent may distribute the prospectus supplement and the accompanying prospectus electronically.

The letter agreement with the placement agent and the purchase agreement with the Initial Purchasers will be included as exhibits to a Current Report on Form 8-K that will be filed with the SEC in connection with this offering.

We are subject to a lock-up agreement for a period of 30 days following the date of this prospectus supplement. Pursuant to the lock-up agreement, we have agreed that neither we nor any subsidiary will, without the prior consent of the Initial Purchasers, (i) directly or indirectly, issue, offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase or otherwise transfer or dispose of any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock or file any registration statement under the Securities Act (other than a Registration Statement on Form S-8) with respect to any of the foregoing, or (ii) enter into any swap or any other agreement or any transaction that transfers, in whole or in part, directly or indirectly, the economic consequence of ownership of our common stock, whether any such swap or transaction described in clause (i) or (ii) above is to be settled by delivery of common stock or such other securities, in cash or otherwise; provided, however, that nothing in the foregoing clauses (i) and (ii) shall be construed as limiting the Company s ability to negotiate and/or otherwise prepare to consummate a transaction following the expiration of the restricted period so long as such transaction is not publicly announced prior to the expiration of the restricted period. The lock-up agreement does not apply to (a) the Series 13 Preferred Stock and warrants to be issued and sold hereunder or issuable upon conversion or exercise thereof, (b) issuances of shares of common stock upon the exercise of warrants issued to the placement agent or Trout Capital LLC, if any, (c) issuances of shares of common stock issuable upon conversion or exchange of currently outstanding convertible notes, (d) issuances of shares of common stock upon the exercise of currently outstanding warrants or amendments to the warrant agreements related thereto, (e) granting options or other securities under our incentive compensation and equity incentive plans existing on the date hereof or issuances of shares of common stock issuable in connection with awards thereunder as of the date hereof, (f) issuances of shares of common stock issuable pursuant to agreements in effect as of the date hereof or amendments related thereto, (g) issuances of shares of common stock in connection with strategic acquisitions or (h) issuances of shares of common stock subject to shareholder approval, provided, however, that in the case of clauses (c) and (d) above, no shares of common stock shall be issued as a result of an amendment to such securities after the date hereof and prior to the expiration of the 30 day lock-up period.

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CERTAIN U.S. FEDERAL INCOME TAX CONSIDERATIONS

All purchasers of Series 13 Preferred Stock and warrants in this offering are advised to consult their own tax advisors regarding the federal, state, local and foreign tax consequences of the purchase, ownership, conversion or exercise, as the case may be, and disposition of the Series 13 Preferred Stock and warrants and the ownership and disposition of shares of common stock issuable upon conversion of the Series 13 Preferred Stock and exercise of warrants in their particular situations.

LEGAL MATTERS

Certain legal matters in connection with the securities offered hereby will be passed upon for us by O Melveny & Myers LLP of San Francisco, California. Certain legal matters relating to Washington law will be passed upon for us by Karr Tuttle Campbell of Seattle, Washington. Ellenoff Grossman & Schole LLP of New York, New York is acting as counsel for the placement agent.

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PROSPECTUS

Making cancer more treatable

$150,000,000

Common Stock

Preferred Stock

Debt Securities

Warrants

Rights

Units

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

- shares of our common stock;
- shares of our preferred stock;
- debt securities;
- warrants to purchase common stock, preferred stock and/or debt securities;
- rights to purchase common stock, preferred stock and/or debt securities; and
- units consisting of two or more of these classes or series of securities.

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

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

securities.

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

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

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

The date of this prospectus is February 16, 2011

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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, debt securities, warrants, rights, units, or any combination of these securities, in one or more offerings. This prospectus provides you with a general description of the securities we may offer. Each time we sell any securities under this prospectus, we will provide a prospectus supplement that will contain more specific information about the terms of that offering, including the specific amounts, prices and terms of the securities offered. Any prospectus supplement may also add to, update or change information contained in this prospectus.

You should read this prospectus, any prospectus supplement, any documents that we incorporate by reference in this prospectus and in any prospectus supplement, and the additional information described below under Where You Can Find More Information before making an investment decision. You should rely only on the information contained or incorporated by reference in this prospectus and any prospectus supplement. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

You should not assume that the information in this prospectus, any prospectus supplement or any documents we incorporate by reference herein or therein is accurate as of any date other than the date on the front of those documents only. Our business, financial condition, results of operations and prospects may have changed since those dates.

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

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the information requirements of the Securities Exchange Act of 1934, as amended, or the Exchange Act. In accordance with the Exchange Act, we file reports, proxy statements and other information with the SEC. Such reports, proxy statements and other information filed by us are available to the public free of charge at www.sec.gov. Copies of certain information filed by us with the SEC are also available on our website at www.celltherapeutics.com. You may also read and copy any document we file at the public reference facilities maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information on the operation of the public reference facilities by calling the SEC at 1-800-SEC-0330.

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

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

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INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

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

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2010;
- our Current Report on Form 8-K filed with the SEC on January 18, 2011 (excluding Item 7.01 and Exhibit 99.1), as amended by our Current Report on Form 8-K/A filed with the SEC on January 28, 2011; and
- the description of our capital stock contained in our Registration Statement on Form 10 filed with the SEC on June 27, 1996, including any amendment or reports filed for the purpose of updating that description.

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

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

Cell Therapeutics, Inc.

501 Elliott Avenue West, Suite 400

Seattle, Washington 98119

(206) 282-7100

Attention: Investor Relations

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, any prospectus supplement and any documents we incorporate by reference herein or therein may contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Exchange Act. All statements other than statements of historical fact are forward-looking statements for purposes of these provisions, including, without limitation:

- any projections of cash resources, revenues, operating expenses or other financial terms;
- any statements of the plans and objectives of management for future operations or programs;
- and statements concerning proposed new products or services;
- any statements regarding future operations, plans, regulatory filings or approvals;
- any statements on plans regarding proposed or potential clinical trials or new drug filing strategies or timelines;
- any statements regarding compliance with the listing standards of The NASDAQ Stock Market, or NASDAQ;
- any statements regarding pending or future mergers or acquisitions; and
- any statements regarding future economic conditions or performance, and any statement of assumptions underlying any of the foregoing.

In some cases, forward-looking statements can be identified by terms such as anticipates, believes, continue, could, estimates, expects, r plans, potential, predicts, should or will or the negative thereof or other comparable terms. Such statements are based on management s curr expectations and are subject to risks and uncertainties which may cause actual results to differ materially from those set forth in the forward-looking statements. There can be no assurance that such expectations or any of the forward-looking statements will prove to be correct, and actual results could differ materially from those projected or assumed in the forward-looking statements. Our future financial condition and results of operations, as well as any forward-looking statements, are subject to inherent risks and uncertainties, including, without limitation, the risk factors described in the section of this prospectus entitled Risk Factors and in the documents incorporated herein by reference. All forward-looking statements and reasons why results may differ included in this prospectus are made as of the date hereof, and we assume no obligation to update any such forward-looking statement or reason why actual results might differ, except to the extent required by law.

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SUMMARY

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

Our Company

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

Corporate Information

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

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The Securities We May Offer

We may offer shares of our common stock, shares of our preferred stock, debt securities, warrants to purchase such securities, rights to purchase such securities and units with a total value of up to $150,000,000 from time to time pursuant to this prospectus at prices and on terms to be determined by market conditions at the time of any offering. This prospectus provides you with a general description of the securities we may offer. Each time we offer a type or series of securities, we will provide a prospectus supplement that will describe the specific amounts, prices and other important terms of the securities, including, to the extent applicable:

Important

Do not send Subscription Rights Statements directly to us. You are responsible for choosing the payment and delivery method for your Subscription Rights Statement and you bear the risks associated with such delivery. If you choose to deliver your Subscription Rights Statement and payment by mail, we recommend that you use registered mail, properly insured, with return receipt requested. We also recommend that you allow a sufficient number of days to ensure delivery to the Subscription Agent prior to the expiration time.

Distribution Arrangements

Maxim Group LLC is the dealer-manager for the Rights Offering. The dealer-manager will provide marketing assistance and advice to us in connection with the Rights Offering and will use its best efforts to solicit the exercise of Subscription Rights and participation in the Over-Subscription Privilege. The dealer-manager is not underwriting or placing any of the Subscription Rights or the Units, shares of common stock or Warrants to be issued in the Rights Offering, and does not make any recommendation with respect to such Subscription Rights (including with respect to the exercise or expiration of such Subscription Rights), Units, shares of common stock or Warrants. We have agreed to pay the dealer-manager certain fees and to reimburse the dealer-manager for certain out-of-pocket expenses incurred in connection with this offering. See "Plan of Distribution" for a discussion of the fees and expenses to be paid to the dealer-manager in connection with this Rights Offering.

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MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES

The following discussion is a summary of material U.S. federal income tax consequences relating to the receipt and exercise (or expiration) of the Subscription Rights acquired through the Rights Offering and the ownership and disposition of shares of our common stock and Warrants received upon exercise of the Subscription Rights, Pre-Funded Warrants or Warrants.

This summary deals only with Subscription Rights acquired through the Rights Offering, shares of our common stock, Pre-Funded Warrants and Warrants acquired upon exercise of Subscription Rights and shares of our common stock acquired upon exercise of the Pre-Funded Warrants or Warrants, in each case, that are held as capital assets by a beneficial owner. This discussion does not address all aspects of U.S. federal income taxation that may be relevant to such a beneficial owner in light of their personal circumstances, including the alternative minimum tax and the Medicare contribution tax on investment income. This discussion also does not address tax consequences to holders that may be subject to special tax rules, including, without limitation, insurance companies, real estate investment trusts, regulated investment companies, grantor trusts, tax-exempt organizations, employee stock purchase plans, partnerships and other pass-through entities, persons holding Subscription Rights, shares of our common stock, participating warrants, Pre-Funded Warrants or Warrants as part of a hedging, integrated, conversion or constructive sale transaction or a straddle, financial institutions, brokers, dealers in securities or currencies, traders that elect to mark-to-market their securities, persons that acquired Subscription Rights, shares of our common stock, participating warrants, Pre-Funded Warrants or Warrants in connection with employment or other performance of services, U.S. Holders (as defined below) that have a functional currency other than the U.S. dollar, U.S. expatriates, and certain former citizens or residents of the United States. In addition, the discussion does not describe any tax consequences arising out of the tax laws of any state, local or foreign jurisdiction, or any U.S. federal tax considerations other than income taxation (such as estate, generation skipping or gift taxation).

The discussion below is based upon the provisions of the Internal Revenue Code of 1986, as amended, or the Code, the United States Treasury regulations promulgated thereunder, rulings and judicial decisions, as of the date hereof, and such authorities may be repealed, revoked or modified, perhaps retroactively. We have not sought, and will not seek, any rulings from the Internal Revenue Service, or the IRS, regarding the matters discussed below. There can be no assurance that the IRS or a court (if the matter were contested) will not take positions concerning the tax consequences of the receipt of Subscription Rights acquired through the Rights Offering by persons holding shares of our common stock or participating warrants, the exercise (or expiration) of the Subscription Rights, the acquisition, ownership and disposition of shares of our common stock and the acquisition, ownership and disposition (or expiration) of Pre-Funded Warrants or Warrants acquired upon

exercise of the Subscription Rights that are different from those discussed below.

As used herein, a "U.S. Holder" means a beneficial owner of shares of our common stock, participating warrants, Subscription Rights, shares of our common stock, Pre-Funded Warrants and Warrants acquired upon exercise of Subscription Rights or shares of our common stock acquired upon exercise of Pre-Funded Warrants or Warrants, as the case may be, that is for U.S. federal income tax purposes: (1) an individual who is a citizen or resident of the United States; (2) a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) created or organized in or under the laws of the United States or any state thereof or the District of Columbia; (3) an estate the income of which is subject to U.S. federal income taxation regardless of its source; or (4) a trust (a) the administration of which is subject to the primary supervision of a court within the United States and one or more United States persons as described in Section 7701(a)(30) of the Code have authority to control all substantial decisions of the trust or (b) that has a valid election under the Treasury Regulations in effect to be treated as a United States person. A "Non-U.S. Holder" is such a beneficial

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owner (other than an entity or arrangement that is treated as a partnership for U.S. federal income tax purposes) that is not a U.S. Holder.

If any entity or arrangement that is treated as a partnership for U.S. federal income tax purposes is the record owner, the U.S. federal income tax treatment of a partner generally will depend upon the status of the partner and the activities of the partnership. Holders that are partnerships (and partners in such partnerships) are urged to consult their own tax advisors.

HOLDERS OF SHARES OF OUR COMMON STOCK AND PARTICIPATING WARRANTS SHOULD CONSULT THEIR OWN TAX ADVISORS REGARDING THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR SITUATIONS AND THE CONSEQUENCES UNDER FEDERAL ESTATE AND GIFT TAX LAWS, FOREIGN, STATE AND LOCAL LAWS AND TAX TREATIES OF THE RECEIPT, OWNERSHIP AND EXERCISE OF SUBSCRIPTION RIGHTS AND THE ACQUISITION, OWNERSHIP AND DISPOSITION OF SHARES OF OUR COMMON STOCK, PRE-FUNDED WARRANTS AND WARRANTS ACQUIRED UPON EXERCISE OF SUBSCRIPTION RIGHTS AND SHARES OF OUR COMMON STOCK ACQUIRED UPON EXERCISE OF PRE-FUNDED WARRANTS OR WARRANTS.

Tax Treatment of Pre-Funded Warrants

Any person that elects to receive Pre-Funded Warrants in lieu of our common stock upon the exercise of Subscription Rights should consult their own tax advisor regarding the application of the U.S. federal income tax laws to their particular situation.

Tax Consequences to U.S. Holders

Taxation of Subscription Rights

Receipt of Subscription Rights

Although the authorities governing transactions such as this Rights Offering are complex and do not speak directly to the consequences of certain aspects of this Rights Offering, including the inclusion of the right to purchase Pre-Funded Warrants and Warrants in the Subscription Rights (rather than the right to purchase only shares of our common stock), the distribution of Subscription Rights to participating warrant holders and the effects of the Over-Subscription Privilege, we do not believe your receipt of Subscription Rights pursuant to the Rights Offering should be treated as a taxable distribution with respect to your existing shares of common stock or participating warrants for U.S. federal income tax purposes. Pursuant to Section 305(a) of the Code, in general, the receipt by a shareholder or a participating warrant holder of a right to acquire stock or warrants should not be included in the taxable income of the recipient. The general rule of non-recognition in Section 305(a) is subject to exceptions in Section 305(b), which include "disproportionate

distributions." A disproportionate distribution is a distribution or a series of distributions, including deemed distributions, that has the effect of the receipt of cash or other property by some shareholders and an increase in the proportionate interest of other shareholders in a corporation's assets or earnings and profits. During the last 36 months, we have not made any distributions of cash or non-stock property with respect to: (i) our common stock or (ii) our options or warrants to acquire common stock. Currently we do not intend to make any future distributions of cash or non-stock property with respect to: (i) our common stock or (ii) our options or warrants to acquire common stock; however, there is no guarantee that we will not make such distributions in the future.

Our position regarding the tax-free treatment of the Subscription Rights distribution is not binding on the IRS or the courts. If this position is finally determined by the IRS or a court to be incorrect, whether on the basis that the issuance of the Subscription Rights is a "disproportionate distribution" or

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otherwise, the fair market value of the Subscription Rights would be taxable to holders of our common stock as a dividend to the extent of the holder's pro rata share of our current and accumulated earnings and profits, if any, with any excess being treated as a return of capital to the extent thereof and then as capital gain. Although no assurance can be given, it is anticipated that we will not have current and accumulated earnings and profits through the end of 2016. Further, if our position is incorrect, the treatment of holders of participating warrants may differ from the treatment of the Subscription Rights distribution to the holders of our common stock. The participating warrant holders may be treated in a manner similar to holders of our common stock but it is possible that they may be subject to different and adverse U.S. federal income tax consequences.

The following discussion is based upon the treatment of the Subscription Rights issuance as a non-taxable distribution with respect to your existing shares of common stock or participating warrants for U.S. federal income tax purposes.

Tax Basis in the Subscription Rights

If the fair market value of the Subscription Rights you receive is less than 15% of the fair market value of your existing shares of common stock or participating warrants (with respect to which the Subscription Rights are distributed) on the date you receive the Subscription Rights, the Subscription Rights will be allocated a zero dollar basis for U.S. federal income tax purposes, unless you elect to allocate your basis in your existing shares of common stock or participating warrants between your existing shares of common stock or participating warrants and the Subscription Rights in proportion to the relative fair market values of the existing shares of common stock or participating warrants and the Subscription Rights, determined on the date of receipt of the Subscription Rights. If you choose to allocate basis between your existing common shares or participating warrants and the Subscription Rights, you must make this election on a statement included with your timely filed tax return (including extensions) for the taxable year in which you receive the Subscription Rights. Such an election is irrevocable.

However, if the fair market value of the Subscription Rights you receive is 15% or more of the fair market value of your existing shares of common stock or participating warrants on the date you receive the Subscription Rights, then you must allocate your basis in your existing shares of common stock or participating warrants between those shares or participating warrants and the Subscription Rights you receive in proportion to their fair market values determined on the date you receive the Subscription Rights.

The fair market value of the Subscription Rights on the date that the Subscription Rights are distributed is uncertain, and we have not obtained, and do not intend to obtain, an appraisal of the fair market value of the Subscription Rights on that date. In determining the fair market value of the Subscription Rights, you should consider all relevant facts and circumstances, including any difference between the Subscription Price of the Subscription Rights and the trading price of our shares of common stock on the

date that the Subscription Rights are distributed, the exercise price of the Warrants, the length of the period during which the Subscription Rights may be exercised and the fact that the Subscription Rights are non-transferable.

Exercise of Subscription Rights

Generally, you will not recognize gain or loss upon the effectiveness of the exercise of a Subscription Right in the Rights Offering. Your adjusted tax basis, if any, in the Subscription Right plus the Subscription Price should be allocated between the new common stock and Warrant acquired upon exercise of the Subscription Right. The basis in the stock or participating warrants upon which the Subscriptions Rights were issued which is allocated to the Subscription Rights under the prior section entitled "Tax Basis in the Subscription Rights" would be further allocated between the new common

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stock and the Warrant acquired upon exercise of the Subscription Right in proportion to their relative fair market values on the date the Subscription Rights were distributed. The Subscription Price should be allocated between the new common stock and Warrant acquired upon exercise of the Subscription Right in proportion to their relative fair market values on the exercise date. These allocations will establish your initial tax basis for U.S. federal income tax purposes in your new common stock and Warrants. The holding period of shares of common stock or a Warrant acquired upon exercise of a Subscription Right in the Rights Offering will begin on the date of exercise.

If you exercise a Subscription Right received in the Rights Offering after disposing of the shares of our common stock or participating warrants with respect to which such Subscription Right is received, then certain aspects of the tax treatment of the exercise of the Subscription Right are unclear, including (1) the allocation of the tax basis between the shares of common stock or participating warrants previously sold and the Subscription Right, (2) the impact of such allocation on the amount and timing of gain or loss recognized with respect to the shares of our common stock or participating warrants previously sold and (3) the impact of such allocation on the tax basis of the shares of our common stock and Warrants acquired upon exercise of the Subscription Right. If you exercise a Subscription Right received in the Rights Offering after disposing of shares of our common stock or participating warrants with respect to which the Subscription Right is received, you should consult with your own tax advisor.

Expiration of Subscription Rights

If you allow Subscription Rights received in the Rights Offering to expire, you should not recognize any gain or loss for U.S. federal income tax purposes, and you should re-allocate any portion of the tax basis in your existing common stock or participating warrants previously allocated to the Subscription Rights that have expired to the existing common stock or participating warrants.

Taxation of Warrants

Sale, Exchange, Redemption or other Taxable Disposition of Warrants

Upon the sale, exchange, redemption or other taxable disposition of a Warrant, in general, you will recognize taxable gain or loss measured by the difference, if any, between (i) the amount of cash and the fair market value of any property received upon such taxable disposition and (ii) your adjusted tax basis in the Warrant as determined pursuant to the rules discussed above. Your gain or loss generally will be capital gain or loss and generally will be long-term capital gain or loss if, at the time of the sale or other disposition, your holding period for the Warrant is more than one year. The deductibility of capital losses is subject to limitations.

Exercise of Warrants

Upon the exercise of a Warrant by paying the exercise price in cash, in general, you will not recognize gain or loss for U.S. federal income tax purposes, except to the extent you receive a cash payment for any such fractional share that would otherwise have been issuable upon exercise of the Warrant. Your initial tax basis in common stock received will equal your adjusted tax basis in the Warrant exercised (as determined pursuant to the rules discussed above), increased by the amount of cash paid to exercise the Warrant and decreased by the adjusted tax basis allocable to any fractional share that would otherwise have been issuable upon exercise of the Warrant. Your holding period for the shares of our common stock received on exercise generally will commence on the day of exercise.

In certain circumstances, namely during any period when a registration statement for the exercise of the Warrants is not in effect, the Warrants will be exercisable on a cashless basis. The tax consequences of a cashless exercise are not clear and could differ from the consequences described

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above, including the possibility that a cashless exercise could be a taxable event. You should consult your own tax advisor regarding the tax consequences of a cashless exercise of a Warrant.

Expiration of Warrants

If you allow a Warrant to expire, you will generally recognize a loss for U.S. federal income tax purposes equal to your adjusted tax basis in the Warrant. In general, such a loss will be a capital loss and will be a short-term or long-term capital loss depending on your holding period for the Warrant.

Certain Adjustments to the Warrants

Under Section 305 of the Code, an adjustment to the number of common shares that will be issued on the exercise of the Warrants, or an adjustment to the exercise price of the Warrants, may be treated as a constructive distribution to you if, and to the extent that, such adjustment has the effect of increasing your proportionate interest in our earnings and profits or assets, depending on the circumstances of such adjustment (for example, if such adjustment is to compensate for a distribution of cash or other property to our shareholders). Adjustments to the exercise price of Warrants made pursuant to a bona fide reasonable adjustment formula that has the effect of preventing dilution of the interest of the holders of the Warrants should generally not be considered to result in a constructive distribution. Any such constructive distribution would be taxable whether or not there is an actual distribution of cash or other property. See the more detailed discussion of the rules applicable to distributions made by us under the heading "Taxation of Common Stock Distributions" below.

Taxation of Common Stock

Distributions

Distributions with respect to shares of our common stock acquired upon exercise of Subscription Rights or upon exercise of Warrants will be taxable as dividend income when actually or constructively received to the extent of our current or accumulated earnings and profits as determined for U.S. federal income tax purposes.

Dividend income received by certain non-corporate U.S. Holders with respect to shares of our common stock generally will be "qualified dividends" subject to preferential rates of U.S. federal income tax, provided that the U.S. Holder meets applicable holding period and other requirements. Subject to similar exceptions for short-term and hedged positions, dividend income on our shares of common stock paid to U.S. Holders that are domestic corporations generally will qualify for the dividends-received deduction. To the extent that the amount of a distribution exceeds our current and accumulated earnings and profits, such distribution will be treated first as a tax-free return of capital to the extent of your adjusted tax basis in such shares of our common stock and thereafter as capital gain.

Dispositions

If you sell or otherwise dispose of shares of common stock acquired upon exercise of Subscription Rights or upon exercise of Warrants in a taxable transaction, you will generally recognize capital gain or loss equal to the difference between the amount realized and your adjusted tax basis in the shares. Such capital gain or loss will be long-term capital gain or loss if your holding period for such shares is more than one year at the time of disposition. Long-term capital gain of a non-corporate U.S. Holder is generally taxed at preferential rates of U.S. federal income tax. The deductibility of capital losses is subject to limitations.

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Information Reporting and Backup Withholding

You may be subject to information reporting and/or backup withholding with respect to the gross proceeds from the disposition of Warrants, shares of our common stock acquired through the exercise of Subscription Rights or through the exercise of Warrants, or dividend payments. Backup withholding (currently at the rate of 28%) may apply under certain circumstances if you (1) fail to furnish your social security or other taxpayer identification number, or TIN, (2) furnish an incorrect TIN, (3) fail to report interest or dividends properly or (4) fail to provide a certified statement, signed under penalty of perjury, that the TIN provided is correct, that you are not subject to backup withholding and that you are a U.S. person for U.S. federal income tax purposes on IRS Form W-9. Any amount withheld from a payment under the backup withholding rules is allowable as a credit against (and may entitle you to a refund with respect to) your U.S. federal income tax liability, provided that the required information is timely furnished to the IRS. Certain persons are exempt from information reporting and backup withholding, including corporations and certain financial institutions, provided that they demonstrate this fact, if requested. You are urged to consult your own tax advisor as to your qualification for exemption from backup withholding and the procedure for obtaining such exemption.

Tax Consequences to Non-U.S. Holders

Taxation of the Subscription Rights

Receipt, Exercise and Expiration of the Subscription Rights

The discussion assumes that the receipt of Subscription Rights will be treated as a non-taxable distribution. See "Tax Consequences to U.S. Holders Taxation of Subscription Rights Receipt of Subscription Rights" above.

Exercise and Expiration of Warrants and Certain Adjustments to Warrants

Exercise of Warrants

In general, a Non-U.S. Holder will not recognize gain or loss for U.S. federal income tax purposes upon exercise of a Warrant, except to the extent the Non-U.S. Holder receives a cash payment for any such fractional share that would otherwise have been issuable upon exercise of the Warrant, which will be treated as a sale subject to the rules described under "Sale or Other Disposition of Common Stock or Warrants" below.

Expiration of Warrants

In general, a Non-U.S. Holder will not be able to utilize a loss recognized upon expiration of a Warrant against the Non-U.S. Holder's U.S. federal income tax liability unless the loss is effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if an income tax treaty so provides, is attributable to a permanent establishment

in the United States) or is treated as a U.S.-source loss and the Non-U.S. Holder is present 183 days or more in the taxable year of disposition and certain other conditions are met.

Certain Adjustments to the Warrants

Under Section 305 of the Code, an adjustment to the number of common shares that will be issued on the exercise of the Warrants, or an adjustment to the exercise price of the Warrants, may be treated as a constructive distribution to a Non-U.S. Holder of the Warrants if, and to the extent that, such adjustment has the effect of increasing such Non-U.S. Holder's proportionate interest in our "earnings and profits" or assets, depending on the circumstances of such adjustment (for example, if such adjustment is to compensate for a distribution of cash or other property to our shareholders). Adjustments to the exercise price of Warrants made pursuant to a bona fide reasonable adjustment

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formula that has the effect of preventing dilution of the interest of the holders of the Warrants should generally not be considered to result in a constructive distribution. Any such constructive distribution would be taxable whether or not there is an actual distribution of cash or other property. See the more detailed discussion of the rules applicable to distributions made by us under the heading " Taxation of Distributions on Common Stock" below.

Taxation of Distributions on Common Stock

Any distributions of cash or property (including any adjustments to the Warrants described in the immediately preceding paragraph) made with respect to our common stock generally will be subject to withholding tax to the extent paid out of our current or accumulated earnings and profits as determined for U.S. federal income tax purposes, if any, at a rate of 30% (or a lower rate prescribed by an applicable income tax treaty). In order to obtain a reduced withholding tax rate, if applicable, you will be required to provide a properly completed IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable, certifying your entitlement to benefits under a treaty. In addition, you will not be subject to withholding tax if you provide an IRS Form W-8ECI certifying that the distributions are effectively connected with your conduct of a trade or business within the United States (and, if an applicable income tax treaty so provides, are attributable to a permanent establishment within the United States); instead, you generally will be subject to U.S. federal income tax, net of certain deductions, with respect to such income at the same rates applicable to U.S. persons. If you are a corporation, a "branch profits tax" of 30% (or a lower rate prescribed by an applicable income tax treaty) also may apply to such effectively connected income.

Non-U.S. Holders may be required to periodically update their IRS Forms W-8.

Any distribution will also be subject to the discussion below under the heading "FATCA."

Sale or Other Disposition of Our Common Stock or Warrants

Subject to the discussion below regarding backup withholding and FATCA, you generally will not be subject to U.S. federal income tax on any gain realized on a sale or other disposition of shares of our common stock or Warrants unless:

- the gain is effectively connected with your conduct of a trade or business within the United States (and, if an applicable income tax treaty so provides, is attributable to a permanent establishment in the United States);

- you are an individual, you hold your Subscription Rights, shares of common stock

or Warrants as capital assets, you are present in the United States for 183 days or more in the taxable year of disposition and certain other conditions are met (in which case you will be subject to a 30% tax, or such lower rate as may be specified by an applicable income tax treaty, on the net gain derived from the disposition, which may be offset by your U.S.-source capital losses, if any); or

we are or have been a "United States real property holding corporation," or USRPHC, for U.S. federal income tax purposes unless an exception for 5% or less shareholders applies.

Gain that is effectively connected with your conduct of a trade or business within the United States (and, if an applicable income tax treaty so provides, is attributable to a permanent establishment within the United States) generally will be subject to U.S. federal income tax, net of certain deductions, at the same rates applicable to U.S. persons. If you are a corporation, a "branch profits tax" of 30% (or a lower rate prescribed in an applicable income tax treaty) also may apply to such effectively connected gain.

A domestic corporation is treated as a USRPHC if the fair market value of its United States real property interests equals or exceeds 50% of the sum of (1) the fair market value of its United States

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real property interests, (2) the fair market value of its non-United States real property interests and (3) the fair market value of any other of its assets which are used or held for use in a trade or business. We believe that we are not currently, and have not been within the relevant testing period, a USRPHC. However, no assurance can be given that we will not become a USRPHC in the future. If we are a USRPHC or become a USRPHC in the future, a Non-U.S. Holder may still not be subject to U.S. federal income tax on a sale or other disposition if an exception for 5% or less shareholders applies. You are urged to consult your own tax advisor regarding the U.S. federal income tax considerations that could result if we are, or become, a USRPHC and with respect to the exception for 5% or less shareholders.

Information Reporting and Backup Withholding

Distributions on our common stock and the amount of tax withheld, if any, with respect to such distributions will generally be subject to information reporting. If you comply with certification procedures to establish that you are not a United States person, additional information reporting and backup withholding should not generally apply to distributions on our common stock and information reporting and backup withholding should not generally apply to the proceeds from a sale or other disposition of Warrants or shares of our common stock. Generally, a Non-U.S. Holder will comply with such procedures if it provides a properly executed IRS Form W-8BEN or W-8BEN-E, as applicable, (or other applicable IRS Form W-8) or otherwise meets documentary evidence requirements for establishing that it is a Non-U.S. Holder, or otherwise establishes an exemption. The amount of any backup withholding will generally be allowed as a refund or credit against your U.S. federal income tax liability, provided that the required information is timely furnished to the IRS.

FATCA

Payments of dividends on our common stock to a Non-U.S. Holder will be subject to a 30% withholding tax if the Non-U.S. Holder fails to provide the withholding agent with documentation sufficient to show that it is compliant with FATCA. Generally such documentation is provided on an executed and properly completed IRS Form W-8BEN or IRS Form W-8BEN-E, as applicable. If dividends are subject to the 30% withholding tax under FATCA, they will not be subject to the 30% withholding tax described above under "Tax Consequences to Non-U.S. Holders Taxation of Distributions on Common Stock." Starting in 2019, payments of the gross proceeds from a sale or exchange of our common stock or other securities may also be subject to FATCA withholding absent proof of FATCA compliance prior to January 1, 2019.

THE PRECEDING DISCUSSION OF MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES IS NOT TAX ADVICE. HOLDERS OF SUBSCRIPTION RIGHTS, SHARES OF OUR COMMON STOCK AND PARTICIPATING WARRANTS SHOULD CONSULT THEIR OWN TAX ADVISORS REGARDING THE APPLICATION OF THE U.S. FEDERAL INCOME TAX LAWS TO THEIR PARTICULAR

SITUATIONS AND THE CONSEQUENCES UNDER FEDERAL ESTATE AND GIFT TAX LAWS, FOREIGN, STATE AND LOCAL LAWS AND TAX TREATIES OF THE RECEIPT, OWNERSHIP AND EXERCISE OF SUBSCRIPTION RIGHTS AND THE ACQUISITION, OWNERSHIP AND DISPOSITION OF SHARES OF OUR COMMON STOCK, PRE-FUNDED WARRANTS AND WARRANTS ACQUIRED UPON EXERCISE OF SUBSCRIPTION RIGHTS AND SHARES OF OUR COMMON STOCK ACQUIRED UPON EXERCISE OF PRE-FUNDED WARRANTS OR WARRANTS.

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DESCRIPTION OF SECURITIES

Our authorized capital stock consists of 25,000,000 shares of common stock, par value $0.01 per share, and 5,000,000 shares of preferred stock, par value $0.01 per share. After our one-for-ten reverse stock split on May 31, 2016, 2,740,212 shares of our common stock were outstanding, and no shares of our preferred stock, were outstanding.

Common Stock

Subject to the preferences that may be applicable to any outstanding preferred stock, holders of our common stock are entitled to receive ratably any dividends that may be declared by our board of directors out of funds legally available for that purpose. Holders of our common stock are entitled to one vote for each share on all matters voted on by stockholders, including the election of directors. Holders of our common stock do not have any conversion, redemption, sinking fund or preemptive rights. In the event of our dissolution, liquidation or winding up, holders of our common stock are entitled to share ratably in any assets remaining after the satisfaction in full of the prior rights of creditors and the aggregate liquidation preference of any preferred stock then outstanding. The rights, preferences and privileges of the holders of our 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 and issue in the future. All outstanding shares of our common stock are, and any shares of common stock that we may issue in the future will be, fully paid and non-assessable.

Preferred Stock

We may issue any class of preferred stock in any series. Our board of directors has the authority, subject to limitations prescribed under Delaware law, to issue preferred stock in one or more series, to establish from time to time the number of shares to be included in each series and to fix the designation, powers, preferences and rights of the shares of each series and any of its qualifications, limitations and restrictions. Our board of directors can also increase or decrease the number of shares of any series, but not below the number of shares of that series then outstanding. Our board of directors may authorize the issuance of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of the holders of the common stock. The issuance of preferred stock, while providing flexibility in connection with possible acquisitions and other corporate purposes, could, among other things, have the effect of delaying, deferring or preventing a change in control of our company and may adversely affect the market price of our common stock and the voting and other rights of the holders of common stock.

Warrants

Warrants Included in Units Issuable in the Rights Offering

The Warrants to be issued as a part of this Rights Offering will be separately transferable following their issuance and through their expiration five years from the date of issuance. The Warrants entitle the holder to purchase one share of common stock at an exercise price of $ per share, 120% of the per Unit price, from the date of issuance through its expiration on , 2021. We intend to apply to list the Warrants for trading on NASDAQ under the symbol "ONTXW," however, there is no assurance that a sufficient number of Subscription Rights will be exercised so that the Warrants will meet the minimum listing criteria to be accepted for listing on NASDAQ. The common stock underlying the Warrants, upon issuance, will also be traded on NASDAQ under the symbol "ONTX."

All Warrants that are purchased in the Rights Offering as part of the Units will be issued in book-entry, or uncertificated, form meaning that you will receive a direct registration (DRS) account statement from our transfer agent reflecting ownership of Warrants if you are a holder of record of shares or warrants. The Subscription Agent will arrange for the issuance of the Warrants as soon as

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practicable after the expiration of the Rights Offering, payment for the Units subscribed for has cleared, and all prorating calculations and reductions contemplated by the terms of the Rights Offering have been effected. If you hold your shares of common stock in the name of a custodian bank, broker, dealer, or other nominee, DTC will credit your account with your nominee with the Warrants you purchased in the Rights Offering.

The Warrants will be exercisable by paying the exercise price in cash, or, solely during any period when a registration statement for the exercise of the Warrants is not in effect, exercisable on a cashless basis.

The exercise price of the Warrants and the number of shares of common stock issuable upon exercise of the Warrants are subject to adjustment in certain circumstances, including a stock split of, stock dividend on, or a subdivision, combination or recapitalization of the common stock. Upon the merger, consolidation, sale of substantially all of our assets, or other similar transaction, the holders of Warrants shall, at the option of the company, be required to exercise the Warrants immediately prior to the closing of the transaction, or such Warrants shall automatically expire. Upon such exercise, the holders of Warrants shall participate on the same basis as the holders of common stock in connection with the transaction.

Except as described below, a holder may not exercise any portion of the Warrant to the extent that the holder would beneficially own more than 4.99% of our outstanding common stock after exercise, except that upon at least 61 days' prior notice from the holder to us, the holder may increase the amount of ownership of outstanding stock after exercising the holder's Warrants up to 9.99% of the number of shares of our common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the Warrants. The foregoing limitation on exercise does not apply to any holder who beneficially owns in excess of 4.99% of our outstanding common stock immediately prior to the Rights Offering.

No public market currently exists for the Warrants. We intend to apply to list the Warrants on NASDAQ under the symbol "ONTXW," although there is no assurance that a sufficient number of Subscription Rights will be exercised so that the Warrants will meet the minimum listing criteria to be accepted for listing on NASDAQ. Even if the Warrants are listed on NASDAQ, an active public market for the Warrants may not be developed or sustained. Without an active trading market, the liquidity of the Warrants will be limited.

Subject to applicable laws and the restriction on transfer set forth in the warrant, the warrant may be transferred at the option of the holder upon surrender of the warrant to us together with the appropriate instruments of transfer.

After the one-year anniversary of issuance, we may redeem the Warrants for $0.001 per Warrant if our common stock is above $ per share, 300% of the exercise price, for each of 10 consecutive trading days.

The Warrants do not confer upon the holder any voting or any other rights of a shareholder of the Company. Upon notice to the Warrants holders, we have the right at any time and from time to time, to reduce the exercise price or to extend the Warrants termination date.

The Warrants will be issued pursuant to a warrant agreement by and between us and Wells Fargo Bank, N.A., as the warrant agent.

Pre-Funded Warrants Issuable in the Rights Offering

Any Pre-Funded Warrants issued as a part of this Rights Offering will be separately transferable following their issuance and through their expiration five years from the date of issuance. The Pre-Funded Warrants entitle the holder to purchase one share of common stock at an exercise price of

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$0.01 per share, and the subscription price per Unit for any such electing investors will be reduced to $ (which equals the Subscription Price for the other Units sold in the Rights Offering, less the $0.01 exercise price for each Pre-Funded Warrant). Each Pre-Funded Warrant will be exercisable from the date of issuance through its expiration on , 2012. The Pre-Funded Warrants will not be listed for trading on any stock exchange or market.

Any Pre-Funded Warrants that are purchased in the Rights Offering as part of the Units will be issued in physical form. The Subscription Agent will arrange for the issuance of the Pre-Funded Warrants as soon as practicable after the expiration of the Rights Offering, payment for the Units subscribed for has cleared, and all prorating calculations and reductions contemplated by the terms of the Rights Offering have been effected.

The Pre-Funded Warrants will be exercisable by paying the exercise price in cash or on a cashless basis. The exercise price of the Pre-Funded Warrants and the number of shares of common stock issuable upon exercise of the Pre-Funded Warrants are subject to adjustment in certain circumstances, including a stock split of, stock dividend on, or a subdivision, combination or recapitalization of the common stock. Upon the merger, consolidation, sale of substantially all of our assets, or other similar transaction, the holders of Pre-Funded Warrants shall, at the option of the company, be required to exercise the Pre-Funded Warrants immediately prior to the closing of the transaction, or such Pre-Funded Warrants shall automatically expire. Upon such exercise, the holders of Pre-Funded Warrants shall participate on the same basis as the holders of common stock in connection with the transaction.

A holder may not exercise any portion of the Pre-Funded Warrant to the extent that the holder would beneficially own more than 4.99% of our outstanding common stock after exercise, except that upon at least 61 days' prior notice from the holder to us, the holder may increase the amount of ownership of outstanding stock after exercising the holder's Pre-Funded Warrant up to 9.99% of the number of shares of our common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the Pre-Funded Warrant.

Subject to applicable laws, the pre-funded warrants may be offered for sale, sold, transferred or assigned without our consent.

The Pre-Funded Warrants do not confer upon the holder any voting or any other rights of a shareholder of the Company.

Other Currently Outstanding Warrants

On January 11, 2016, we issued common stock purchase warrants, referred to as our "participating warrants," to purchase up to 96,842 shares of our common stock at an exercise price equal to $11.50 per share, subject to customary adjustments and as adjusted for our one-for-ten reverse stock split effective

May 31, 2016. Upon the terms and subject to the limitations on exercise and the conditions set forth in the participating warrants, the participating warrants are exercisable at any time on or after July 11, 2016 and on or prior to July 11, 2021. The participating warrants expire on July 11, 2021. The participating warrants entitle the holder to participate in any dividend or distribution, including any distribution of rights to purchase common stock, to the holders of our common stock. Subject to limited exceptions, a holder of participating warrants will not have the right to exercise any portion of its participating warrants if the holder, together with its affiliates, would beneficially own in excess of 9.99% of the number of shares of our common stock outstanding immediately after giving effect to such exercise.

The participating warrants and the shares of our common stock issuable upon exercise of the participating warrants were offered and sold without registration under the Securities Act of 1933, as amended ("the Securities Act"), or state securities laws, in reliance on the exemptions provided by

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Section 4(a)(2) of the Act and/or Regulation D promulgated thereunder and in reliance on similar exemptions under applicable state laws. Accordingly, neither the participating warrants nor the shares of our common stock underlying the participating warrants may be offered or sold except pursuant to an effective registration statement under the Securities Act or pursuant to an available exemption from, or in a transaction not subject to, the registration requirements of the Securities Act and in accordance with applicable state securities laws.

Prior to our initial public offering, in connection with a credit facility, we issued a warrant to purchase 6,128 shares of Series G convertible preferred stock in June 2009. The warrant was immediately exercisable upon issuance and expires on July 30, 2016. Following the consummation of our initial public offering and the conversion of our Series G convertible preferred stock into shares of common stock in July 2013, and subsequent adjustments pursuant to the adjustment provisions set forth in that warrant, after our one-for-ten reverse stock split on May 31, 2016, the warrant was exercisable for approximately 582 shares of common stock at an exercise price per share of approximately $103.08.

Delaware Anti-Takeover Law and Provisions in Our Certificate of Incorporation and Bylaws

Delaware Anti-Takeover Law

We are subject to Section 203 of the Delaware General Corporation Law. Section 203 generally prohibits a public Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person became an interested stockholder, unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding specified shares; or
- at or subsequent to the date of the transaction, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least $66^{2}/_{3}$% of the outstanding voting stock

which is not owned by the interested stockholder.

Section 203 defines a "business combination" to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, lease, exchange, mortgage, pledge, transfer or other disposition of 10% or more of the assets of the corporation to or with the interested stockholder;
- subject to exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- subject to exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an "interested stockholder" as any person that is:

- the owner of 15% or more of the outstanding voting stock of the corporation;

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an affiliate or associate of the corporation who was the owner of 15% or more of the outstanding voting stock of the corporation at any time within three years immediately prior to the relevant date; or

the affiliates and associates of the above.

Under specific circumstances, Section 203 makes it more difficult for an "interested stockholder" to effect various business combinations with a corporation for a three-year period, although the stockholders may, by adopting an amendment to the corporation's certificate of incorporation or bylaws, elect not to be governed by this section, effective 12 months after adoption.

Our certificate of incorporation and bylaws do not exclude us from the restrictions of Section 203. We anticipate that the provisions of Section 203 might encourage companies interested in acquiring us to negotiate in advance with our board of directors since the stockholder approval requirement would be avoided if a majority of the directors then in office approve either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder.

Certificate of Incorporation and Bylaws

Provisions of our certificate of incorporation and bylaws may delay or discourage transactions involving an actual or potential change of control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares, or transactions that our stockholders might otherwise deem to be in their best interests. Therefore, these provisions could adversely affect the price of our common stock. Among other things, our certificate of incorporation and bylaws will:

permit our board of directors to issue up to 5,000,000 shares of preferred stock, with any rights, preferences and privileges as they may designate;

provide that all vacancies on our board of directors, including as a result of newly created directorships, may, except as otherwise required by law, be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum;

require that any action to be taken by our stockholders must be effected at a duly called annual or special meeting of stockholders and not be taken by written consent;

provide that stockholders seeking to present proposals before a meeting of stockholders or to nominate candidates for election as directors at a meeting of stockholders must provide advance notice in writing, and also specify requirements as to the form and content of a stockholder's notice;

not provide for cumulative voting rights, thereby allowing the holders of a majority of the shares of common stock entitled to vote in any election of directors to elect all of the directors standing for election; and

provide that special meetings of our stockholders may be called only by the board of directors or by such person or persons requested by a majority of the board of directors to call such meetings.

Transfer Agent

The transfer agent and registrar for our common stock is Wells Fargo Bank, N.A.

Listing

Our common stock is listed on the Nasdaq Capital Market under the symbol "ONTX."

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PLAN OF DISTRIBUTION

On or about July 6, 2016, we will distribute the Subscription Rights, Subscription Rights Statements and copies of this prospectus to the holders of our common stock and participating warrants on the Record Date. Subscription Rights holders who wish to exercise their Subscription Rights and purchase Units must complete the Subscription Rights Statement and return it with payment for the shares to the Subscription Agent at the following address:

By Mail:

Wells Fargo Bank, N.A.
Shareowner Services
Voluntary Corporate Actions
P.O. Box 64858
St. Paul, Minnesota 55164-0858

By Hand or Overnight Courier:

Wells Fargo Bank, N.A.
Shareowner Services
Voluntary Corporate Actions
1110 Centre Pointe Curve, Suite 101
Mendota Heights, Minnesota 55120

See "The Rights Offering Methods for Exercising Subscription Rights."

If you have any questions, you should contact the dealer-manager for the Rights Offering:

Maxim Group LLC
405 Lexington Avenue
New York, New York 10174
Attention Syndicate Department
Email: syndicate@maximgrp.com
Telephone: (212) 895-3745

Other than as described in this prospectus, we do not know of any existing agreements between any shareholder, broker, dealer, underwriter or agent relating to the sale or distribution of the underlying common stock.

Maxim Group LLC is the dealer-manager of this Rights Offering. We and Maxim may introduce one or more co-dealer-managers and one or more financial advisors to assist in the Rights Offering. In any such event, Maxim Group LLC will be the lead dealer-manager. In such capacity, the dealer-manager will provide marketing assistance and advice to us in connection with this offering and will solicit the exercise of Subscription Rights and participation in the Over-Subscription Privilege. The dealer-manager is not underwriting or placing any of the Subscription Rights or the Units, shares of common stock, Warrants or Pre-Funded Warrants being issued in this offering,

and does not make any recommendation with respect to such Subscription Rights (including with respect to the exercise or expiration of such Subscription Rights), Units, shares of common stock, Warrants or Pre-Funded Warrants.

In connection with this Rights Offering, we have agreed to pay to the dealer-manager a cash fee equal to (a) 4.5% of the dollar amount of the Units sold to any holders of Subscription Rights who were beneficial owners of shares of our common stock prior to July 30, 2013, and (b) 8.0% of the dollar amount of the Units sold to any other holders of Subscription Rights. We will provide to the dealer-manager upon completion of the Rights Offering a non-accountable expense allowance equal to the lesser of $100,000 or 3% of the gross proceeds of the Rights Offering for expenses incurred in

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connection with the Rights Offering. We advanced $30,000 against out-of-pocket accountable expenses to Maxim Group LLC upon its engagement as a dealer-manager; provided that Maxim Group LLC will promptly reimburse to us (i) any portion of the advance not used for actual out-of-pocket expenses, if the Rights Offering is not completed, and (ii) the full amount of the advance, if the Rights Offering is completed.

We have also agreed to indemnify the dealer-manager and its respective affiliates against certain liabilities arising under the Securities Act. The dealer-manager's participation in this offering is subject to customary conditions contained in the dealer-manager agreement, including the receipt by the dealer-manager of an opinion of our counsel. The dealer-manager and its affiliates may provide to us from time to time in the future in the ordinary course of their business certain financial advisory, investment banking and other services for which they will be entitled to receive fees.

Maxim Group LLC is a broker-dealer and member of the Financial Industry Regulatory Authority, Inc. The principal business address of Maxim Group LLC is 405 Lexington Avenue, New York, New York 10174.

EXPERTS

The consolidated financial statements of Onconova Therapeutics, Inc. appearing in Onconova Therapeutics, Inc.'s Annual Report (Form 10-K) for the year ended December 31, 2015 have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their report thereon (which contains an explanatory paragraph describing conditions that raise substantial doubt about the Company's ability to continue as a going concern as described in Note 1 to the consolidated financial statements), included therein and incorporated herein by reference. Such consolidated financial statements are incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

LEGAL MATTERS

The validity of the shares of common stock offered hereby and certain other legal matters will be passed upon for us by Pepper Hamilton LLP, Philadelphia, Pennsylvania.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission, or "SEC." You may read and copy any documents we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, D.C. 20549. You may obtain information on the operation of the Public Reference

Room by calling the SEC at 1-800-SEC-0330. In addition, our filings with the SEC are available to the public through the SEC's Internet site at http://www.sec.gov. Information about us is also available on our website at http://www.onconova.com. This URL and the SEC's URL above are intended to be inactive textual references only. The information on the SEC's website and our website is not part of, and is not incorporated into, this prospectus.

We have filed a registration statement covering our shares of common stock subject to this offering, of which this prospectus forms a part. This prospectus, however, does not contain all of the information set forth in the registration statement and the exhibits to the registration statement. For further information concerning us and the securities we may offer and sell, you should read the entire registration statement and the exhibits to the registration statement. The registration statement has been filed electronically and may be obtained in any manner listed above. Any statements contained in this prospectus concerning the provisions of any document are not necessarily complete, and, in each instance, reference is made to the copy of such document filed as an exhibit to the registration

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statement or otherwise filed with the SEC. Each such statement is qualified in its entirety by such reference.

INCORPORATION BY REFERENCE

The SEC allows us to "incorporate by reference" the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus. We incorporate by reference the documents listed below:

- Our Annual Report on Form 10-K for the fiscal year ended December 31, 2015, which we filed with the SEC on March 28, 2016;

- Our Definitive Proxy Statement on Schedule 14A for our 2016 Annual Meeting of Stockholders held May 18, 2016, which we filed with the SEC on April 13, 2016;

- Our Quarterly Report on Form 10-Q for the fiscal period ended March 31, 2016, which we filed with the SEC on May 11, 2016;

- Our current reports on Form 8-K filed with the SEC on January 6, 2016, February 4, 2016, February 17, 2016, March 9, 2016, May 23, 2016 and May 31, 2016;

- The description of our common stock contained in our registration statement on Form 8-A filed on July 23, 2013 (Registration no. 001-36020) with the SEC, including any amendment or report filed for the purpose of updating such description;

- All documents filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, after the date of the initial filing of the registration statement of which this prospectus is a part and prior to the effectiveness of such registration statement; and

- All documents filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act on or after the date of this prospectus and before we stop offering

the securities under this prospectus.

We will provide without charge to each person, including any beneficial owner, to whom this prospectus is delivered, upon his or her written or oral request, a copy of any or all documents referred to above which have been or may be incorporated by reference into this prospectus but not delivered with this prospectus excluding exhibits to those documents unless they are specifically incorporated by reference into those documents. You can request those documents from us, at no cost, by writing or telephoning us at: Onconova Therapeutics, Inc., 375 Pheasant Run, Newtown, Pennsylvania, 18940, (267) 759-3036, Attention: Benjamin Hoffman.

The most recent information that we file with the SEC automatically updates and supersedes older information. The information contained in any such filing will be deemed to be a part of this prospectus, commencing on the date on which the filing is made.

Information furnished under Items 2.02 or 7.01 (or corresponding information furnished under Item 9.01 or included as an exhibit) in any past or future Current Report on Form 8-K that we file with the SEC, unless otherwise specified in such report, is not incorporated by reference in this prospectus.

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PROSPECTUS

Subscription Rights to Purchase Up to Units
Consisting of an Aggregate of Up to Shares of Common Stock and Warrants to Purchase Up to Shares of Common Stock
at a Subscription Price of $ Per Unit

Dealer-Manager

Maxim Group LLC

, 2016

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PART II
Information Not Required In Prospectus

Item 13. Other Expenses of Issuance and Distribution.

The following is a statement of estimated expenses in connection with the issuance and distribution of the securities being registered, excluding dealer-manager fees. All expenses incurred with respect to the registration of the common stock will be borne by us. All amounts are estimates except the SEC registration fee and the FINRA filing fee.

	Amount to be Paid
SEC Registration Fee	$ 2,266
FINRA Filing Fee	3,875
NASDAQ Fee	5,000
Printing Expenses	40,000
Legal Fees and Expenses	200,000
Accounting Fees and Expenses	75,000
Subscription Agent and Warrant Agent Fees and Expenses	100,000
Miscellaneous Expenses	20,000
	$ 446,141

Item 14. Indemnification of Directors and Officers.

We are incorporated under the laws of the State of Delaware. Section 145 of the Delaware General Corporation Law provides that a Delaware corporation may indemnify any persons who are, or are threatened to be made, parties to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation), by reason of the fact that such person was an officer, director, employee or agent of such corporation, or is or was serving at the request of such person as an officer, director, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, provided that such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests and, with respect to any criminal action or proceeding, had no reasonable cause to believe that his or her conduct was illegal.

A Delaware corporation may indemnify any persons who are, or are threatened to be made, a party to any threatened, pending or completed action or suit by or in the right of the corporation by reason of the fact that such person was a director, officer, employee or agent of such corporation, or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation or enterprise. The

indemnity may include expenses (including attorneys' fees) actually and reasonably incurred by such person in connection with the defense or settlement of such action or suit provided that such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the corporation's best interests except that no indemnification is permitted without judicial approval if the officer or director is adjudged to be liable to the corporation. Where an officer or director is successful on the merits or otherwise in the defense of any action referred to above, the corporation must indemnify him or her against the expenses which such officer or director has actually and reasonably incurred. Our certificate of incorporation and bylaws provide for the indemnification of our directors and officers to the fullest extent permitted under the Delaware General Corporation Law.

Section 102(b)(7) of the Delaware General Corporation Law permits a corporation to provide in its certificate of incorporation that a director of the corporation shall not be personally liable to the

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corporation or its stockholders for monetary damages for breach of fiduciary duties as a director, except for liability for any:

- transaction from which the director derives an improper personal benefit;
- act or omission not in good faith or that involves intentional misconduct or a knowing violation of law;
- unlawful payment of dividends or redemption of shares; or
- breach of a director's duty of loyalty to the corporation or its stockholders.

Our certificate of incorporation includes such a provision. Expenses incurred by any officer or director in defending any such action, suit or proceeding in advance of its final disposition shall be paid by us upon delivery to us of an undertaking, by or on behalf of such director or officer, to repay all amounts so advanced if it shall ultimately be determined that such director or officer is not entitled to be indemnified by us.

As permitted by the Delaware General Corporation Law, we have entered into indemnification agreements with our directors and executive officers. These agreements, among other things, require us to indemnify each director and officer to the fullest extent permitted by law and advance expenses to each indemnitee in connection with any proceeding in which indemnification is available.

At present, there is no pending litigation or proceeding involving any of our directors or executive officers as to which indemnification is required or permitted, and we are not aware of any threatened litigation or proceeding that may result in a claim for indemnification.

We have an insurance policy covering our officers and directors with respect to certain liabilities, including liabilities arising under the Securities Act.

Item 15. Recent Sales of Unregistered Securities.

On October 8, 2015, the Company entered into the Purchase Agreement with Lincoln Park, pursuant to which the Company has the right to sell to, and Lincoln Park is obligated to purchase from the Company, up to $16.5 million in shares of the Company's common stock, subject to certain limitations, from time to time, over the 36-month period commencing on the date that this registration statement is declared effective by the SEC and a final prospectus in connection therewith is filed. On October 8, 2015, Lincoln Park purchased 846,755 shares of the

Company's common stock for a total purchase price of $1,500,000 as an initial purchase under the Purchase Agreement and the Company issued 200,000 shares of common stock pursuant to the terms of the Purchase Agreement as consideration for its commitment to purchase additional shares of common stock under the Purchase Agreement. The sale of such shares to Lincoln Park was not registered under the Securities Act because it was made in a transaction exempt from registration under Section 4(a)(2) of the Securities Act and/or Rule 506 promulgated thereunder.

On January 5, 2016, the Company entered into a Securities Purchase Agreement (the "Purchase Agreement") with an institutional investor (the "Investor") providing for the issuance and sale by the Company of 1,936,842 shares of the Company's common stock at a purchase price of $0.95 per share and warrants to purchase 968,421 shares of the Company's common stock (the "Private Placement Warrants") for aggregate gross proceeds of $1,840,000. The shares of the Company's common stock were offered pursuant to an effective shelf registration statement on Form S-3, declared effective by the SEC on November 20, 2014 (File No. 333-199219). The Private Placement Warrants were issued and sold without registration under the Securities Act in reliance on the exemptions provided by Section 4(a)(2) of the Securities Act and/or Regulation D promulgated thereunder and in reliance upon similar exemptions under applicable state laws. Each Private Placement Warrant shall be initially exercisable on the six (6) month anniversary of the issuance date at an exercise price equal to $1.15 per

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share of Common Stock, subject to customary adjustments, and have a term of exercise of five (5) years from the initial exercise date. H.C. Wainwright & Co., LLC acted as the Company's exclusive placement agent for the issuance and sale of the shares of common stock and Private Placement Warrants, and was paid a cash fee equal to 7.5% of the gross proceeds received by the Company from the sale of the securities in the transactions and was reimbursed by the Company for up to $50,000 in expenses.

Item 16. Exhibits and Financial Statement Schedules.

(a)

Exhibits

The exhibits to the registration statement are listed in the Exhibit Index to this registration statement and are incorporated herein by reference.

(b)

Financial statement schedules

All schedules have been omitted because either they are not required, are not applicable or the information is otherwise set forth in the financial statements and related notes thereto.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

(1)

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

(i)

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

(ii)

To reflect in the prospectus any facts or events arising after the effective date of this registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus

filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

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

Provided, *however*, that Paragraphs (1)(i), (1)(ii) and (1)(iii) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to section 13 or section 15(d) of the Exchange Act that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

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

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

(5) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

If the registrant is subject to Rule 430C (§230.430C of this chapter), each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A (§230.430A of this chapter), shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(6) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i)

Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424 (§230.424 of this chapter);

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

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

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director,

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officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b) (1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.

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

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the Township of Newtown, Commonwealth of Pennsylvania, on the 20th day of June, 2016.

ONCONOVA THERAPEUTICS, INC.

By: /s/ RAMESH KUMAR, PH.D.

Ramesh Kumar, Ph.D.
President and Chief Executive Officer

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

Signature	Title	Date
/s/ RAMESH KUMAR, PH.D. Ramesh Kumar, Ph.D.	Director, President and Chief Executive Officer (Principal Executive Officer and Principal Operating Officer)	June 20, 2016
/s/ MARK GUERIN Mark Guerin	Vice President, Financial Planning and Accounting (Principal Financial Officer and Principal Accounting Officer)	June 20, 2016
* Henry S. Bienen, Ph.D.	Director	June 20, 2016
* Jerome E. Groopman, M.D.	Director	June 20, 2016
* Michael B. Hoffman	Chairman, Board of Directors	June 20, 2016
* James J. Marino	Director	June 20, 2016

*	Director	June 20, 2016
Viren Mehta, Pharm.D		

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Signature	Title	Date
*		
E. Premkumar Reddy, Ph.D.	Director	June 20, 2016
*		
Jack E. Stover	Director	June 20, 2016

The undersigned by signing his name hereto signs and executes this Pre-Effective Amendment No. 1 to Registration Statement on Form S-1 pursuant to the Powers of Attorney executed by the above named signatories and previously filed with the Commission on June 1, 2016.

*By: /s/ RAMESH KUMAR, PH.D.

Ramesh Kumar, Ph.D., Attorney-in-Fact

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EXHIBIT INDEX

Exhibit Number	Exhibit Description
1.1	Form of Dealer Manager Agreement
3.1	Tenth Amended and Restated Certificate of Incorporation of Onconova Therapeutics, Inc. *(Incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on July 30, 2013).*
3.2	Amended and Restated Bylaws of Onconova Therapeutics, Inc. *(Incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on July 30, 2013).*
3.3	Certificate of Amendment to Tenth Amended and Restated Certificate of Incorporation of Onconova Therapeutics, Inc. *(Incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed on May 31, 2016).*
4.1	Form of Certificate of Common Stock *(Incorporated by reference to Exhibit 4.1 to Pre-Effective Amendment No. 1 the Company's Registration Statement on Form S-l filed on July 11, 2013.)*
4.2	Eighth Amended and Restated Stockholders' Agreement, effective as of July 27, 2012, by and among Onconova Therapeutics, Inc. and certain stockholders named therein *(Incorporated by reference to Exhibit 4.2 to Pre-Effective Amendment No. 1 to the Company's Registration Statement on Form S-l filed on July 11, 2013).*
4.3	Amendment No. 1 to Eighth Amended and Restated Stockholders' Agreement, effective as of July 9, 2013 *(Incorporated by reference to Exhibit 4.2 to Pre-Effective Amendment No. 1 the Company's Registration Statement on Form S-l filed on July 11, 2013).*
4.4	Form of warrant issued January 11, 2016 (*Incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K filed on January 6, 2016).*
4.5Δ	Form of Subscription Rights Statement
4.6	Form of Warrant Certificate for Warrants underlying Units
4.7	Form of Warrant Agreement
4.8	Form of Pre-Funded Warrant

5.1	Opinion of Pepper Hamilton LLP
10.1*	Development and License Agreement, effective as of September 19, 2012, by and between Onconova Therapeutics, Inc. and Baxter Healthcare SA *(Incorporated by reference to Exhibit 10.1 to Pre-Effective Amendment No. 2 the Company's Registration Statement on Form S-l filed on July 18, 2013).*
10.2*	License Agreement, effective as of July 5, 2011, by and between Onconova Therapeutics, Inc. and SymBio Pharmaceuticals Limited *(Incorporated by reference to Exhibit 10.2 to Pre-Effective Amendment No. 2 the Company's Registration Statement on Form S-l filed on July 18, 2013).*
10.3*	First Amendment to License Agreement, effective as of September 2, 2011, by and between Onconova Therapeutics, Inc. and SymBio Pharmaceuticals Limited *(Incorporated by reference to Exhibit 10.3 to the Company's Registration Statement on Form S-l filed on June 14, 2013).*
10.4*	License Agreement, effective as of January 1, 1999, by and between Onconova Therapeutics, Inc. and Temple University Of The Commonwealth System of Higher Education *(Incorporated by reference to Exhibit 10.4 to the Company's Registration Statement on Form S-l filed on June 14, 2013).*

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Exhibit Number	Exhibit Description
10.5*	Amendment to License Agreement, effective as of September 1, 2000, by and between Temple University Of The Commonwealth System of Higher Education and Onconova Therapeutics, Inc. *(Incorporated by reference to Exhibit 10.5 to the Company's Registration Statement on Form S-1 filed on June 14, 2013).*
10.6*	Amendments to Exclusive License Agreement, effective as of March 21, 2013, by and between Temple University Of The Commonwealth System of Higher Education and Onconova Therapeutics, Inc. *(Incorporated by reference to Exhibit 10.6 to the Company's Registration Statement on Form S-l filed on June 14, 2013).*
10.7*	Definitive Agreement, effective as of May 12, 2010, by and between Onconova Therapeutics, Inc. and The Leukemia and Lymphoma Society *(Incorporated by reference to Exhibit 10.7 to the Company's Registration Statement on Form S-l filed on June 14, 2013).*
10.8*	First Amendment to Definitive Agreement, effective as of June 23, 2011, by and between Onconova Therapeutics, Inc. and The Leukemia and Lymphoma Society *(Incorporated by reference to Exhibit 10.8 to the Company's Registration Statement on Form S-l filed on June 14, 2013).*
10.9*	Second Amendment to Definitive Agreement, effective as of May 29, 2012, by and between Onconova Therapeutics, Inc. and The Leukemia and Lymphoma Society *(Incorporated by reference to Exhibit 10.9 to the Company's Registration Statement on Form S-l filed on June 14, 2013).*
10.10*	Third Amendment to Definitive Agreement, effective as of January 5, 2013, by and between Onconova Therapeutics, Inc. and The Leukemia and Lymphoma Society *(Incorporated by reference to Exhibit 10.10 to the Company's Registration Statement on Form S-l filed on June 14, 2013).*
10.11*	Termination of Agreement, effective as of February 5, 2013, by and between Onconova Therapeutics, Inc. and The Leukemia and Lymphoma Society *(Incorporated by reference to Exhibit 10.11 to the Company's Registration Statement on Form S-l filed on June 14, 2013).*
10.12*	Limited Liability Company Agreement of GBO, LLC, dated as of December 12, 2012, by and between Onconova Therapeutics, Inc. and GVK Biosciences Private Limited *(Incorporated by reference to Exhibit 10.12 to the Company's*

Registration Statement on Form S-l filed on June 14, 2013).

10.13 Onconova Therapeutics, Inc. 2007 Equity Compensation Plan, and forms of agreement thereunder *(Incorporated by reference to Exhibit 10.13 to Pre-Effective Amendment No. 1 the Company's Registration Statement on Form S-l filed on July 11, 2013).*

10.14 Employment Agreement, effective as of July 1, 2015, by and between Onconova Therapeutics, Inc. and Ramesh Kumar, Ph.D. *(Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on July 8, 2015).*

10.15 Letter Agreement, effective as of January 1, 2016, by and between Onconova Therapeutics, Inc. and Ramesh Kumar, Ph.D. *(Incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on February 17, 2016).*

10.16 Amended and Restated Employment Agreement, effective as of July 1, 2015, by and between Onconova Therapeutics, Inc. and Thomas McKearn, M.D., Ph.D. *(Incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on July 8, 2015).*

10.17 Amended and Restated Employment Agreement, effective as of July 1, 2015, by and between Onconova Therapeutics, Inc. and Ajay Bansal. *(Incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K filed on July 8, 2015).*

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Exhibit Number	Exhibit Description
10.18	Consulting Agreement, effective as of January 1, 2012, by and between Onconova Therapeutics, Inc. and E. Premkumar Reddy, Ph.D., including Consultant Agreement Renewal, dated February 27, 2013 *(Incorporated by reference to Exhibit 10.23 to the Company's Registration Statement on Form S-1 filed on June 14, 2013)*
10.19	Form of Indemnification Agreement entered into by and between Onconova Therapeutics, Inc. and each director and executive officer *(Incorporated by reference to Exhibit 10.24 to Pre-Effective Amendment No. 1 the Company's Registration Statement on Form S-1 filed on July 11, 2013).*
10.20	Onconova Therapeutics, Inc. 2013 Equity Compensation Plan, and forms of agreement thereunder *(Incorporated by reference to Exhibit 10.25 to Pre-Effective Amendment No. 1 the Company's Registration Statement on Form S-1 filed on July 11, 2013).*
10.21	Onconova Therapeutics, Inc. 2013 Performance Bonus Plan *(Incorporated by reference to Exhibit 10.26 to Pre-Effective Amendment No. 1 the Company's Registration Statement on Form S-1 filed on July 11, 2013).*
10.22	Employment Agreement, effective as of July 1, 2015, by and between Onconova Therapeutics, Inc. and Dr.Manoj Manair *(Incorporated by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K filed on July 8, 2015).*
10.23	Employment Agreement, effective as of July 1, 2015, by and between Onconova Therapeutics, Inc. and Mark Guerin *(Incorporated by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K filed on February 17, 2016).*
10.24	Amended and Restated Employment Agreement between Onconova Therapeutics, Inc. and Steven Fruchtman, M.D. *(Incorporated by reference to Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q filed on August 13, 2015).*
10.25	Purchase Agreement between Onconova Therapeutics, Inc. and Lincoln Park Capital Fund, LLC, dated October 8, 2015 *(Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on October 8, 2015).*
10.26	Registration Rights Agreement between Onconova Therapeutics, Inc. and Lincoln Park Capital Fund, LLC, dated October 8, 2015 *(Incorporated by reference to Exhibit 10.2 to the Company's Current*

Report on Form 8-K filed on October 8, 2015).

10.27	Form of Securities Purchase Agreement between Onconova Therapeutics and the Investor party thereto, dated January 5, 2016 (*Incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K filed on January 6, 2016).*
21.1	Subsidiaries of Onconova Therapeutics, Inc. *(Incorporated by reference to Exhibit 21.1 to the Company's Annual Report on Form 10-K filed on March 28,2016).*
23.1	Consent of Ernst & Young, LLP.
23.2	Consent of Pepper Hamilton LLP (included in Exhibit 5.1)
24.1Δ	Power of Attorney
99.1Δ	Form of Instructions as to Use of Subscription Rights Statements
99.2Δ	Form of Letter to Shareholders who are Record Holders

To be filed by amendment.

Δ Previously filed.

* Confidential treatment has been requested with respect to certain portions of this exhibit. Omitted portions have been filed separately with the Securities and Exchange Commission.