As filed with the Securities and Exchange Commission on August 28, 2014

Registration No. 333-194845

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Amendment No. 4
to
Form S-1

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

Syndax Pharmaceuticals, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**2834**	**32-0162505**
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification Number)

400 Totten Pond Road, Suite 110
Waltham, Massachusetts 02451
(781) 419-1400

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Arlene M. Morris
President and Chief Executive Officer
Syndax Pharmaceuticals, Inc.
400 Totten Pond Road, Suite 110
Waltham, Massachusetts 02451
(781) 419-1400

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Laura A. Berezin **John H. Booher** **Hogan Lovells US LLP** **4085 Campbell Avenue, Suite 100** **Menlo Park, California 94025** **(650) 463-4000**	**John S. Pallies** **Chief Financial Officer and Treasurer** **Syndax Pharmaceuticals, Inc.** **400 Totten Pond Road, Suite 110** **Waltham, Massachusetts 02451** **(781) 419-1400**	**David Peinsipp** **Andrew S. Williamson** **Charles S. Kim** **Cooley LLP** **101 California Street** **San Francisco, California 94111** **(415) 693-2000**

Approximate date of commencement of proposed sale to the public: As soon as practicable after this registration statement becomes effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act, check the following box. ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☐ Accelerated filer ☐ Non-accelerated filer ☒ (Do not check if a smaller reporting company) Smaller reporting company ☐

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	**Proposed Maximum Aggregate Offering Price[(1)]**	**Amount of Registration Fee[(2)]**
Common Stock, $0.0001 par value per share	$74,175,000	$9,554

(1) Estimated solely for the purpose of calculating the amount of the registration fee in accordance with Rule 457(o) under the Securities Act of 1933, as amended, and includes the offering price of the shares of common stock that the underwriters have an option to purchase to cover over-allotments, if any.

(2) Calculated pursuant to Rule 457(o) based on an estimate of the proposed maximum aggregate offering price. The registrant previously paid the total amount of the registration fee.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until this registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

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The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities nor does it seek an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED AUGUST 28, 2014

PRELIMINARY PROSPECTUS

Syndax Pharmaceuticals, Inc.

4,300,000 Shares
Common Stock

We are offering 4,300,000 shares of our common stock. This is our initial public offering and no public market currently exists for our common stock. We expect the initial public offering price to be between $13.00 and $15.00 per share.

We have applied to list our common stock on the NASDAQ Global Market under the symbol “SNDX.” We are an “emerging growth company” as defined by the Jumpstart Our Business Startups Act of 2012 and, as such, we have elected to comply with certain reduced public company reporting requirements for this prospectus and future filings.

Investing in our common stock involves a high degree of risk. See “Risk Factors” beginning on page 15 of this prospectus.

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.

	PER SHARE	TOTAL
Initial public offering price	$	$
Underwriting discounts and commissions(1)	$	$
Proceeds, before expenses, to us	$	$

(1) See “Underwriting” for a description of the compensation payable to the underwriters.

Certain of our existing stockholders, including affiliates of our directors, have indicated an interest in purchasing up to an aggregate of approximately $15.0 million of shares of our common stock in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters may determine to sell more, less or no shares in this offering to any of these stockholders, or any of these stockholders may determine to purchase more, less or no shares in this offering.

Delivery of the shares of common stock purchased in this offering is expected to be made on or about , 2014. We have granted the underwriters an option for a period of 30 days to purchase up to 645,000 additional shares of common stock solely to cover over-allotments, if any.

Deutsche Bank Securities **Jefferies**

JMP Securities **Wedbush PacGrow Life Sciences**

Prospectus dated , 2014

For investors outside the United States: neither we nor any of the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of shares of our common stock and the distribution of this prospectus outside the United States.

Except as otherwise indicated herein or as the context otherwise requires, references in this prospectus to “Syndax,” “the company,” “we,” “us,” “our” and similar references refer to Syndax Pharmaceuticals, Inc. and our wholly owned subsidiary. “Syndax” is a registered trademark and the “Syndax” and “Syndax Pharmaceuticals” logos are unregistered trademarks of the company. This prospectus also contains registered marks, trademarks and trade names of other companies. All other trademarks, registered marks and trade names appearing in this prospectus are the property of their respective holders.

PROSPECTUS SUMMARY

The following summary highlights information contained elsewhere in this prospectus and is qualified in its entirety by the more detailed information and financial statements included elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. Before you decide to invest in our common stock, you should read and carefully consider the following summary together with the entire prospectus, including our financial statements and the related notes thereto appearing elsewhere in this prospectus and the matters discussed in the sections in this prospectus entitled "Risk Factors," "Selected Consolidated Financial Data" and "Management's Discussion and Analysis of Financial Condition and Results of Operations." Some of the statements in this prospectus constitute forward-looking statements that involve risks and uncertainties. See "Special Note Regarding Forward-Looking Statements and Industry Data." Our actual results could differ materially from those anticipated in such forward-looking statements as a result of certain factors, including those discussed in the "Risk Factors" and other sections of this prospectus.

Our Company

We are a late-stage biopharmaceutical company focused on the development and commercialization of our lead product candidate, entinostat, an epigenetic therapy for treatment-resistant cancers. In September 2013, entinostat was granted Breakthrough Therapy designation by the U.S. Food and Drug Administration, or FDA, based on data from our completed randomized Phase 2b clinical trial in estrogen receptor positive, or ER+, locally recurrent or metastatic breast cancer. This trial showed statistically significant improvement in the primary endpoint of progression-free survival, or PFS, and showed statistically significant improvement in overall survival, an exploratory endpoint.

We and our collaborators at the National Cancer Institute, or NCI, will evaluate entinostat in a pivotal Phase 3 clinical trial in hormone receptor, or HR, positive locally advanced or metastatic breast cancer, which we refer to as advanced breast cancer. The Phase 3 clinical trial will be conducted by the Eastern Cooperative Oncology Group – American College of Radiology Imaging Network Cancer Research Group, or ECOG-ACRIN, under sponsorship and funding support from the NCI. We are supporting the Phase 3 clinical trial under a Cooperative Research and Development Agreement, or CRADA, with the NCI and a separate agreement with ECOG-ACRIN. The protocol for the Phase 3 clinical trial was reviewed and agreed upon by the FDA under a Special Protocol Assessment, or SPA, agreement with the NCI in January 2014. ECOG-ACRIN activated the trial in March 2014 with PFS data expected in mid-2017.

To develop entinostat for use as an immunomodulatory agent, we currently plan to conduct a Phase 1b clinical trial to examine the combination of entinostat with antibodies targeting programmed cell death protein 1, or PD1, or programmed cell death ligand 1, or PDL1, to characterize the safety, define a recommended Phase 2 dose and assess the preliminary clinical activity of this combination. In addition, we also plan to evaluate entinostat with other hormone therapies in breast cancer and with other immune therapies in lung and renal cancers. Additional investigator- and NCI-sponsored trials are being conducted to provide Phase 2 proof-of-concept data for entinostat in metastatic lung cancer and other solid and hematologic cancers.

To further enhance our breast cancer program, we plan to conduct a Phase 2 clinical trial to further study the association between a potential biomarker of entinostat activity and clinical

outcome, which we identified in our previous trial. We would require additional financial resources beyond what we expect to have following this offering in order to initiate this trial, and we may not be able to obtain such additional funds.

Entinostat is an oral, weekly or bi-weekly, selective histone deacetylase, or HDAC, inhibitor that has been well-tolerated in clinical trials to date. HDACs are a class of enzymes with a predominant role in regulating gene expression through a chemical modification to DNA-associated proteins known as histones. This chemical modification is part of a regulatory system that controls gene expression, known as epigenetics. When the function of these epigenetic enzymes is altered, gene expression is changed in ways that often leads to disease. For example, specific HDACs are over-expressed in cancer cells, leading to improper gene regulation, which results in uncontrolled cell growth and resistance to cancer therapies. Based upon our preclinical results, we believe entinostat is a potent inhibitor of these cancer-relevant HDACs, thereby restoring normal gene expression and protein function to slow cancer growth and turn off activated cancer therapy resistance pathways. We believe entinostat is differentiated through its selectivity for cancer-relevant HDACs and clinical activity profile, including convenient oral dosing and long half-life.

Entinostat targets cancer cell growth and the primary and acquired resistance pathways that limit the effectiveness and durability of cancer therapies. We observed in clinical trials that entinostat, in combination with other cancer therapies, may enhance and extend their therapeutic benefit resulting in prolonged PFS and overall survival. We believe that our approach with entinostat is applicable to a broad range of cancer therapies and across a wide spectrum of tumor types. We have collected clinical data in both advanced breast and lung cancer, which we believe supports this approach and demonstrates the significant clinical and commercial potential for entinostat in targeting resistance to cancer therapies.

Our Strategy

Our goal is to develop and commercialize entinostat as an effective treatment to target resistance to cancer therapies in breast cancer, lung cancer and other indications. The core elements of our business strategy are to:

- ***Obtain regulatory approval for entinostat in combination with hormone therapy in advanced breast cancer.*** Under sponsorship and funding support from the NCI, ECOG-ACRIN plans to conduct a 600 patient Phase 3 clinical trial testing exemestane plus entinostat versus exemestane plus placebo in HR-positive men and postmenopausal women with hormone refractory, advanced breast cancer. We are supporting the Phase 3 clinical trial under a CRADA with the NCI and a separate agreement with ECOG-ACRIN. ECOG-ACRIN activated the trial in March 2014 with PFS data expected in mid-2017.
- ***Develop entinostat for use as an immunomodulatory agent.*** Preclinical studies have indicated that entinostat inhibits the activity of host immune cells that function to suppress the activity of anti-tumor immune responses. Based on these findings and emerging preclinical data demonstrating synergistic combined anti-tumor effects of entinostat and immune therapy, we are currently planning a Phase 1b clinical trial to examine the combination of entinostat with antibodies targeting PD1 or PDL1 to characterize the safety, define a recommended Phase 2 dose and assess the preliminary clinical activity of this combination. We anticipate initiating this trial in early 2015 with safety, recommended Phase 2 dose, preliminary activity and correlative data available in mid-2016.

- ***Expand the clinical and commercial breadth of entinostat in breast cancer, lung cancer and other indications.*** We and our collaborators currently have eleven studies, consisting of nine ongoing and two planned, that are designed to provide clinical proof-of-concept for promising opportunities that we have identified in breast cancer, lung cancer and other indications. These studies do not require additional financial support from us and are being or will be conducted through our NCI collaboration with additional support from the *Stand Up To Cancer* funding initiative. In addition, we also plan to evaluate entinostat with other hormone therapies in breast cancer and other immune therapies in lung and renal cancers.
- ***Capitalize on our identification of potential biomarkers for entinostat.*** In our completed Phase 2b clinical trials in breast and lung cancer, we identified potential biomarkers for subsets of patients that experienced improved clinical outcomes with entinostat when compared to patients in the control arm. For our breast cancer and non-small cell lung cancer, or NSCLC, indications, we plan to conduct randomized Phase 2 clinical trials in the future to further study the patient biomarker enrichment strategy. These trials would require additional financial resources beyond what we expect to have following the offering.

Entinostat

Entinostat is an oral HDAC inhibitor of the benzamide chemical class of compounds. In preclinical studies, entinostat has inhibited the activity of the HDACs believed to be the most important HDACs in control of tumor cell proliferation, cell cycle control and DNA damage repair. In addition, entinostat has exhibited a wide range of anti-tumor activity, alone or in combination with other therapies. Specifically, entinostat is synergistic with aromatase inhibitors, anti-estrogens and epidermal growth factor receptor, or EGFR, inhibitors, supporting its further investigation in breast and lung cancer.

We believe that certain features of entinostat provide a differentiated clinical activity profile from other HDAC inhibitors. Such features include:

- a longer half-life, which means that each dose of entinostat can act for a longer time on the cancer cells, minimizing the frequency of dosing and potentially reducing the severity and frequency of adverse events;
- oral delivery, allowing for more convenient dosing;
- selectivity for specific cancer-relevant HDAC enzymes; and
- a mechanism of action that inhibits multiple drivers of cancer growth.

Clinical Development Programs of Entinostat

The following table sets forth the primary clinical trials using entinostat in breast cancer, lung cancer and other indications:

Breast Cancer	Preclinical	Phase 1	Phase 2	Phase 3	Sponsor	Data Expected
E2112: HR-positive Pivotal Phase 3 Registration (combo with exemestane)					NCI/Syndax	Mid-2017
NCI-8871: HER2-positive (combo with lapatinib and trastuzumab)					NCI	Late 2014
GCC0927: TNBC (combo with hormone therapy)					University of Maryland	Early 2016
NSCLC	**Preclinical**	**Phase 1**	**Phase 2**	**Phase 3**	**Sponsor**	**Data Expected**
NCI-9253: Epigenetic Priming to Chemotherapy (combo with azacitidine)					NCI	Late 2015
J1353: Epigenetic Priming to Immunotherapy (combo with azacitidine)					Johns Hopkins	Late 2015
Other Indications	**Preclinical**	**Phase 1**	**Phase 2**	**Phase 3**	**Sponsor**	**Data Expected**
Immunotherapies (combo with anti-PD1 antibodies)					Syndax	Planned mid-2016
Solid Tumor: Renal cell; other NSCLC					NCI	2014-2017
Hematological Malignancies: AML; ALL					NCI/Johns Hopkins	2014-2015

Entinostat in Breast Cancer

Our primary strategy with entinostat is aimed at treating HR-positive breast cancer patients in combination with hormone therapy. HR-positive breast cancer refers to cases in which the estrogen receptor, or ER, or progesterone receptor, or PR, is expressed alone or in combination with each other. This type of breast cancer represents approximately 70% of all breast cancer cases. We are initially focused on the treatment of HR-positive men and postmenopausal women with advanced breast cancer who have progressed after standard of care hormonal agents. We believe that our strategy to overcome resistance to hormonal agents with entinostat may improve outcomes for breast cancer patients.

We conducted a randomized, placebo-controlled Phase 2b clinical trial, which we refer to as our ENCORE 301 trial, to test our hypothesis that combining entinostat with exemestane in ER+ advanced breast cancer could overcome hormone therapy resistance, thereby sensitizing cells to anti-estrogen therapy. In our trial, of the 130 postmenopausal patients with ER+ advanced breast cancer progressing on a non-steroidal aromatase inhibitor, 64 patients were randomly assigned to the exemestane plus entinostat, which we refer to as EE, group and 66 patients were randomly assigned to the exemestane plus placebo, which we refer to as EP, group. The primary endpoint was PFS, with overall survival as an exploratory endpoint. We collected blood samples from a subset of patients in order to evaluate whether protein lysine acetylation, a biomarker of entinostat activity, could be predictive of clinical outcome. The trial met the statistical criteria for a positive PFS endpoint using a pre-specified p-value of 0.10 from a one-sided test for statistical significance. The overall survival benefit observed in the EE group was also statistically significant versus the EP group. The results are summarized below:

- Median PFS approximately doubled to 4.3 months in the EE group versus 2.3 months in the EP group, corresponding to a statistically significant hazard ratio of 0.73; 95% confidence interval, or CI, of 0.50 to 1.07; P2-sided=0.11; P1-sided=0.055.

- Median overall survival improved to 28.1 months in the EE group versus 19.8 months in the EP group corresponding to a statistically significant hazard ratio of 0.59; 95% CI of 0.36 to 0.97; P2-sided=0.036; P1-sided=0.018.
- Elevated levels of protein lysine acetylation biomarker, known as hyperacetylation, were associated with an improved clinical benefit with prolonged PFS of 8.6 months in the subset of EE treated patients from whom blood was taken.
- Overall, entinostat was well-tolerated.

Explanations of the meanings of the various efficacy endpoints that we have used and plan to use in our clinical trials are described in more detail on page 91 of the “Business” section of this prospectus.

Development Plan of Entinostat in Breast Cancer

Building on the statistically significant results shown in our Phase 2b clinical trial, we have the following two trials planned, which combine entinostat with approved therapies in our target patient populations in advanced breast cancer.

E2112: Pivotal Phase 3 Clinical Trial

We have developed with ECOG-ACRIN the Phase 3 clinical trial to confirm the PFS and overall survival benefits observed in the Phase 2b clinical trial, which will be conducted by ECOG-ACRIN under sponsorship and funding support from the NCI. We are supporting the Phase 3 clinical trial under a CRADA with the NCI and a separate agreement with ECOG-ACRIN. The trial is designed to be a randomized, double-blind, placebo-controlled trial of EE compared to EP. The protocol for the Phase 3 clinical trial was reviewed and agreed upon by the FDA under a SPA agreement with the NCI in January 2014. A SPA agreement is a written agreement on the design and size of clinical trials intended to form the primary basis of a claim of effectiveness in a New Drug Application, or NDA, from the FDA. ECOG-ACRIN activated the trial in March 2014. The trial initiated enrollment of approximately 600 patients across the cooperative group network of up to 800 sites worldwide in the second quarter of 2014. We anticipate that the trial will require approximately 40 months to fully enroll patients with primary PFS endpoint data expected in mid-2017.

The primary objective of the trial is to evaluate whether the addition of entinostat to exemestane improves either PFS or overall survival in HR-positive men and postmenopausal women with human epidermal growth factor receptor 2, or HER2, negative, advanced breast cancer who have previously progressed on a non-steroidal aromatase inhibitor. The NCI and ECOG-ACRIN, in collaboration with us, have designed the trial to have two primary endpoints of PFS and overall survival. We expect that either endpoint may serve as the basis for submitting an NDA, if data are positive.

The primary analysis of PFS will be conducted when 247 PFS events occur out of the initial 360 patients enrolled. At the time of the primary PFS analysis, which we anticipate will occur in the second half of 2016, the first interim analysis of overall survival will also be conducted. Stopping rules based upon the interim analyses of overall survival have been outlined such that enrollment may terminate early if the statistical boundary for overall survival is met. Because of the smaller numbers of patients and limited length of follow-up at the time of the first interim analysis of overall survival, we do not expect to meet the criteria for early stopping at that time. In the absence of early stopping, the results of the primary analysis of PFS will be made

available to us when all 600 patients have entered the trial, which is anticipated to be mid-2017. If the PFS endpoint is met, interim overall survival results will be released to us at that time as well. If the overall survival data demonstrate a positive trend, we expect they will be used to supplement an NDA submission based on meeting the primary PFS endpoint.

If the primary analysis of PFS fails to achieve statistical significance, a positive overall survival outcome at any interim analysis during the conduct of the trial will also be a potential approval pathway. ECOG-ACRIN will perform seven interim analyses of overall survival approximately every six months to assess the potential superiority of entinostat plus exemestane relative to placebo plus exemestane. The 410 deaths required for the primary analysis of overall survival takes into consideration any statistical impact of the various interim analyses on the analysis of the overall survival endpoint. If the interim analyses do not demonstrate a statistically significant overall survival benefit, ECOG-ACRIN will not release the results of such interim analyses to us.

The primary analysis of overall survival data represents another opportunity for submission of an NDA to the FDA for potential approval. The primary analysis of overall survival will occur when 410 deaths from among the 600 patients enrolled have occurred. We expect this analysis to occur in the second half of 2019.

ENCORE 305: Phase 2 Clinical Trial

In our completed Phase 2b clinical trial, we demonstrated in a subset of patients that hyperacetylation may be a biomarker for identifying best responders to the combination of entinostat plus a hormone therapy. We designed a new Phase 2 clinical trial to replicate and further characterize hyperacetylation as a potential biomarker for clinical response. The trial will combine entinostat with fulvestrant to determine whether the clinical benefit observed in combination with exemestane can be extended to a second hormone therapy. We have suspended work on this Phase 2 clinical trial, and we would require additional financial resources beyond what we expect to have following this offering in order to initiate this trial, and we may not be able to obtain such additional funds.

Other Development Activities in Breast Cancer

In addition to our ongoing development program studying the combination of entinostat and exemestane for the treatment of advanced breast cancer, we have conducted a Phase 2 clinical trial to examine the combination of entinostat with aromatase inhibitors. We are also currently collaborating with the NCI and investigators on combination trials of entinostat with other therapies for HER2-positive breast cancer and triple-negative breast cancer, or TNBC.

- ***ENCORE 303: Completed Phase 2 Clinical Trial.*** We conducted an open-label, single-arm Phase 2 clinical trial of entinostat in combination with aromatase inhibitors in 27 patients with advanced breast cancer. The trial provided early evidence of entinostat benefit and safety in combination with aromatase inhibitors.
- ***NCI-8871: HER2-Positive Breast Cancer—Safety Trial***. We are collaborating with investigators at MD Anderson Cancer Center to determine whether the addition of entinostat to a second HER2 targeted therapy can overcome resistance that had developed in response to prior HER2 targeted therapy.
- ***GCC0927: TNBC—Exploratory Trial***. We are collaborating with investigators at University of Maryland to determine whether the combination of entinostat and anastrozole can overcome the inherent resistance of TNBC to hormone therapy.

Entinostat in Lung Cancer

Our lung cancer program is focused on advancing two combination approaches shown in preclinical studies to inhibit lung cancer cell growth. The first approach combines entinostat with erlotinib, an approved epidermal growth factor receptor, or EGFR, inhibitor, and the second approach combines entinostat with azacitidine, a DNA methyltransferase, or DNMT, inhibitor. We believe that successful treatment of NSCLC and introduction of novel therapeutic approaches will be dependent on the identification of biomarkers that allow patient selection for the optimization of response.

In a completed Phase 2 clinical trial, our collaborators at Johns Hopkins University under sponsorship of the NCI, conducted a single-arm, two-stage, open-label clinical trial of the combination of entinostat and azacitidine in patients with metastatic NSCLC. All of these patients had been heavily pre-treated with a median of three prior regimens for metastatic disease and had shown no meaningful response to such treatment. Although this population was heavily pre-treated, patients given the combination of entinostat and azacitidine achieved objective responses, including a complete response, a partial response with complete resolution of multiple liver metastases, and several patients with durable stable disease. Our collaborators also noted that patients receiving therapy after progressing on entinostat and azacitidine had a higher than expected objective response rate to subsequent therapies. Most striking was that all five patients that received an immune therapy such as nivolumab as their next therapy, derived clinical benefit, three with partial responses and two with durable stable disease. Accordingly, based on these findings as well as emerging preclinical data demonstrating synergistic combined anti-tumor effects of entinostat and immune therapy, we plan to initiate a series of clinical studies in combination with targeted immune therapies.

We conducted a randomized, double-blind, placebo-controlled Phase 2b clinical trial, which we refer to as the ENCORE 401 clinical trial, of entinostat in combination with erlotinib as compared to erlotinib plus placebo. The trial enrolled 132 patients with metastatic NSCLC who experienced disease progression after one or two prior regimens of therapy or within six months of completion of chemotherapy following surgery. Patients in the trial received treatment with erlotinib in a 150 mg dose daily with entinostat or placebo in a 10 mg dose on days 1 and 15 of a 28-day cycle. Patients could receive up to six cycles of therapy, subject to discontinuation in the event of disease progression or unacceptable toxicity. While the ENCORE 401 clinical trial did not meet its primary endpoint of PFS rate at four months, we identified a subset of patients that had extended overall survival with entinostat combined with erlotinib versus erlotinib alone using a predefined, retrospective analysis. These patients expressed high levels of epithelial cadherin, or E-cadherin, a biomarker of epithelial lung cancers in their tumor samples.

As a follow up to the ENCORE 401 clinical trial and to further study the E-cadherin patient biomarker enrichment strategy, we have planned a randomized, Phase 2 clinical trial of 200 NSCLC patients selected prior to randomization based on expression of high levels of the E-cadherin biomarker in their tumor. We would require additional financial resources beyond what we expect to have following this offering in order to support the costs of such a confirmatory Phase 2 clinical trial, and we may not be able to obtain such additional funds.

Development Plan of Entinostat in Lung Cancer

The following trials of entinostat combinations planned by investigators at Johns Hopkins University are designed to build on the initial NCI-funded trial data in metastatic NSCLC to further study the observation that dual epigenetic therapy can augment the clinical activity of cytotoxic or immune therapy.

- ***NCI-9253: Epigenetic Priming to Chemotherapy Trial.*** This NCI-funded Phase 2 clinical trial is currently enrolling up to 165 metastatic NSCLC patients in three different arms, (i) chemotherapy alone, (ii) chemotherapy preceded by injectible azacitidine plus entinostat, or (iii) chemotherapy preceded by oral azacitidine plus entinostat.
- ***J1353: Epigenetic Priming to Immunotherapy Trial.*** This investigator-sponsored Phase 2 clinical trial, funded by *Stand Up To Cancer*, is currently enrolling up to 120 patients with metastatic NSCLC and is designed to test the ability of epigenetic therapy—either azacitidine alone or the entinostat and azacitidine combination—to enhance the response of NSCLC patients to nivolumab, a type of immunotherapy.

Development Plan of Entinostat as an Immunomodulatory Agent

In order to fully understand the potential for entinostat to potentiate the activity of immune therapies, we plan to work with our collaborators to initiate a series of clinical studies in combination with targeted immune therapies in melanoma, breast cancer, lung cancer and other solid tumors. Based on findings of our collaborators at Johns Hopkins University in a completed Phase 2 clinical trial and on emerging preclinical data demonstrating synergistic combined anti-tumor effects of entinostat and immune therapy, we are currently planning a Phase 1b clinical trial to examine the combination of entinostat with antibodies targeting PD1 or PDL1 to characterize the safety, define a recommended Phase 2 dose and assess the preliminary clinical activity of this combination.

Development Plan of Entinostat in Other Cancer Indications

In addition to our programs in breast and lung cancer, we believe there are numerous opportunities for expanding the indications in which entinostat may be used in combination therapy to target epigenetic and immunologic mechanisms of resistance. While focused on solid tumors, we also believe that opportunities for epigenetic therapy with entinostat may also exist in a number of hematological indications. We are pursuing hematological indications where clinical activity has been demonstrated for epigenetic agents as single agents.

Risks Associated with Our Business

Our ability to implement our business strategy is subject to numerous risks and uncertainties. As a late-stage biopharmaceutical company, we face many risks inherent in our business and our industry generally. You should carefully consider all of the information set forth in this prospectus and, in particular, the information under the heading “Risk Factors,” prior to making an investment in our common stock. These risks include, among others, the following:

- we have no source of product revenue, may never achieve or maintain profitability, have incurred net losses since our inception and anticipate that we will continue to incur net losses for the foreseeable future;
- we will require additional capital to finance our planned operations, which may not be available to us on acceptable terms, or at all;

- entinostat is our only product candidate. If we are unable to successfully complete clinical development of, obtain regulatory approval for and commercialize entinostat, our business prospects will be significantly harmed;
- the failure of ECOG-ACRIN to adequately perform its obligations and responsibilities in the conduct of the Phase 3 clinical trial or to meet expected deadlines could delay or prevent obtaining regulatory approval for or commercializing entinostat in a timely manner or at all;
- if ECOG-ACRIN experiences delays in completing the planned Phase 3 clinical trial, is unable to enroll patients for such trial or entinostat fails to demonstrate safety and efficacy to the satisfaction of regulatory authorities, we may incur additional costs or experience delays in completing, or be unable to complete, the development and commercialization of entinostat;
- we face substantial competition, which may result in others discovering, developing or commercializing products before or more successfully than us;
- if we are unable to obtain or protect intellectual property rights, we may not be able to compete effectively in our market; and
- if we breach our license agreement with Bayer Pharma AG (formerly known as Bayer Schering Pharma AG), or Bayer, related to entinostat or if the license agreement is otherwise terminated, we could lose the ability to continue the development and commercialization of entinostat.

Our Corporate Information

We were incorporated under the laws of the State of Delaware in October 2005. Our principal executive offices are located at 400 Totten Pond Road, Suite 110, Waltham, Massachusetts 02451, and our telephone number is (781) 419-1400. Our website address is www.syndax.com. Our website and the information contained on, or that can be accessed through, the website will not be deemed to be incorporated by reference in, and are not considered part of, this prospectus. You should not rely on any such information in making your decision to purchase our common stock.

Implications of Being an Emerging Growth Company

As a company with less than $1.0 billion in revenue during our last fiscal year, we qualify as an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. An emerging growth company may take advantage of specified reduced reporting and other burdens that are otherwise applicable generally to public companies. These provisions include:

- a requirement to have only two years of audited financial statements and only two years of related management’s discussion and analysis;
- an exemption from compliance with the auditor attestation requirement on the effectiveness of our internal control over financial reporting;
- an exemption from compliance with any requirement that the Public Company Accounting Oversight Board may adopt regarding mandatory audit firm rotation or a supplement to the auditor’s report providing additional information about the audit and the financial statements;

- reduced disclosure about the company's executive compensation arrangements; and
- exemptions from the requirements to obtain a non-binding advisory vote on executive compensation or a stockholder approval of any golden parachute arrangements.

We may take advantage of these provisions for up to five years or such earlier time that we are no longer an emerging growth company. We would cease to be an emerging growth company if we have more than $1.0 billion in annual revenues, have more than $700 million in market value of our capital stock held by non-affiliates, or issue more than $1.0 billion of non-convertible debt over a three-year period. We may choose to take advantage of some, but not all, of the available benefits under the JOBS Act. We have taken advantage of some reduced reporting burdens in this prospectus. Accordingly, the information contained herein may be different than the information you receive from other public companies in which you hold stock.

In addition, the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting standards. This provision allows an emerging growth company to delay the adoption of some accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of delayed adoption of new or revised accounting standards and, therefore, we will be subject to the same requirements to adopt new or revised accounting standards as other public companies that are not emerging growth companies.

The Offering

Common stock to be offered	4,300,000 shares
Common stock to be outstanding immediately following this offering	12,180,745 shares
Over-allotment option	We have granted the underwriters an option for 30 days from the date of this prospectus to purchase up to 645,000 additional shares of common stock to cover over-allotments, if any.
Use of proceeds	We expect to use the proceeds from this offering for the following purposes: (i) to support the Phase 3 clinical trial of entinostat in HR-positive locally advanced or metastatic breast cancer to the primary endpoint of PFS data; (ii) to fund the Phase 1b clinical trial of entinostat in combination with antibodies targeting PD1 to characterize the safety, define a recommended Phase 2 dose and assess the preliminary clinical activity of this combination; (iii) to conduct activities to support the filing of an NDA, including manufacturing of registration batches of active pharmaceutical ingredient and final drug product; and (iv) for working capital and general corporate purposes. See “Use of Proceeds” for a more complete description of the intended use of proceeds from this offering.
Risk factors	You should read the “Risk Factors” section of this prospectus for a discussion of factors to carefully consider before deciding to invest in shares of our common stock.
Proposed NASDAQ Global Market symbol	SNDX

Certain of our existing stockholders, including affiliates of our directors, have indicated an interest in purchasing up to an aggregate of approximately $15.0 million of shares of our common stock in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters may determine to sell more, less or no shares in this offering to any of these stockholders, or any of these stockholders may determine to purchase more, less or no shares in this offering.

The number of shares of our common stock outstanding immediately following this offering set forth above is based on 7,880,745 shares of our common stock outstanding as of June 30, 2014, which gives effect to the conversion of all outstanding shares of our convertible preferred stock into an aggregate of 7,807,593 shares of our common stock upon completion of this offering.

The number of shares of our common stock outstanding immediately following this offering excludes:

- 923,874 shares of our common stock issuable upon the exercise of stock options outstanding as of June 30, 2014 under our 2007 Stock Plan, as amended, or 2007 Plan, at a weighted-average exercise price of $7.83 per share;
- 233,415 shares of our common stock issuable upon the exercise of a warrant issued to Bayer on March 26, 2007, or the Bayer Warrant, at an exercise price of $1.23 per share, based upon 13,104,619 shares of our common stock outstanding as of June 30, 2014 on a fully diluted basis immediately following this offering, which warrant is expected to remain outstanding upon completion of this offering;
- 2,000,000 shares of our common stock (which includes 72,280 shares reserved for issuance under the 2007 Plan as of June 30, 2014) reserved for issuance under our 2013 Omnibus Incentive Plan, or 2013 Plan, which will become effective upon completion of this offering, as well as any future increases in the number of shares of our common stock reserved for issuance under the 2013 Plan; and
- 131,000 shares of our common stock reserved for issuance under our 2013 Employee Stock Purchase Plan, or ESPP, which will become effective upon completion of this offering, as well as any future increases in the number of shares of our common stock reserved for issuance under the ESPP.

Except as otherwise indicated, the information in this prospectus assumes or gives effect to:

- a 10-for-1 split of our Series A convertible preferred stock effected on March 8, 2013;
- a 1-for-10 reverse stock split of our common stock and convertible preferred stock effected on November 18, 2013;
- a 1-for-12.3 reverse stock split of our common stock and convertible preferred stock effected on June 3, 2014;
- no exercise by the underwriters of their over-allotment option to purchase up to 645,000 additional shares of common stock from us;
- the conversion of all outstanding shares of our convertible preferred stock outstanding as of June 30, 2014 into an aggregate of 7,807,593 shares of our common stock upon completion of this offering;
- no purchases by certain of our existing stockholders, including affiliates of our directors, who have indicated an interest in purchasing up to an aggregate of approximately $15.0 million of shares of our common stock in this offering; and
- the filing of our amended and restated certificate of incorporation and the adoption of our amended and restated bylaws, which will occur immediately prior to the completion of this offering.

SUMMARY CONSOLIDATED FINANCIAL DATA

The following table summarizes our consolidated financial data. We have derived the following consolidated statements of operations data for the years ended December 31, 2012 and 2013 from our audited consolidated financial statements, included elsewhere in this prospectus. The following consolidated statements of operations data for the six months ended June 30, 2013 and 2014 and the consolidated balance sheet data as of June 30, 2014, are derived from our unaudited interim consolidated financial statements, included elsewhere in this prospectus. The unaudited interim consolidated financial statements have been prepared on a basis consistent with our audited consolidated financial statements included in this prospectus and include, in our opinion, all adjustments, consisting only of normal recurring adjustments, necessary for the fair statement of the financial information in those statements. Our historical results are not necessarily indicative of results to be expected for the full year or any period in the future. The summary consolidated financial data presented below should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the related notes thereto, included elsewhere in this prospectus. The summary consolidated financial data in this section is not intended to replace our consolidated financial statements and the related notes thereto.

	Year Ended December 31,		Six Months Ended June 30,		Period From October 11, 2005 (Date of Inception) to June 30,
(in thousands, except share and per share data)	**2012**	**2013**	**2013**	**2014**	**2014**
Consolidated Statements of Operations Data:					
Operating expenses:					
Research and development	$ 5,240	$ 3,208	$ 1,304	$ 7,011	$ 59,051
General and administrative	3,494	5,363	2,104	3,296	30,916
Total operating expenses	8,734	8,571	3,408	10,307	89,967
Other (expense) income:					
Interest (expense) income, net	(4,673)	(771)	(596)	5	(7,431)
Change in fair value of common stock warrant liability	(431)	(1,943)	(586)	1,794	(1,581)
Change in fair value of convertible preferred stock warrant liability	669	128	128	—	415
Change in fair value of tranche liability	—	(3,144)	(618)	—	(3,144)
Change in fair value of embedded derivative	3,205	—	—	—	1,530
Other (expense) income, net	(1)	130	130	—	119
Total other (expense) income	(1,231)	(5,600)	(1,542)	1,799	(10,092)
Net loss	$ (9,965)	$ (14,171)	$ (4,950)	$ (8,508)	$ (100,059)
Net (loss) income attributable to common stockholders:					
Basic	$ (9,965)	$ (60,454)	$ 71	$ (11,746)	
Diluted	$ (9,965)	$ (60,454)	$ (3,539)	$ (11,746)	
Net (loss) income per share attributable to common stockholders:					
Basic	$(197.73)	$ (1,139.14)	$ 1.41	$ (162.45)	
Diluted	$(197.73)	$ (1,139.14)	$ (0.74)	$ (162.45)	
Weighted-average common shares outstanding used to compute net income (loss) per share attributable to common stockholders[1]:					
Basic	50,397	53,070	50,397	72,306	
Diluted	50,397	53,070	4,775,040	72,306	
Pro forma net loss per share attributable to common stockholders, basic and diluted		$ (1.55)		$ (1.31)	
Pro forma weighted-average common shares outstanding used to compute net loss per share attributable to common stockholders, basic and diluted[1]		5,714,129		7,879,899	

(1) See note 2 to our consolidated financial statements and our condensed consolidated financial statements included elsewhere in this prospectus for an explanation of the method used to calculate the historical and pro forma net (loss) income per share, basic and diluted, and the number of shares used in the computation of the per share amounts.

	As of June 30, 2014		
(in thousands)	**Actual**	**Pro Forma[1]**	**Pro Forma As Adjusted[2]**
Consolidated Balance Sheet Data:			
Cash and cash equivalents	$ 4,680	$ 4,680	$ 59,745
Working capital	549	549	56,492
Total assets	9,660	9,660	60,568
Convertible preferred stock	143,562	—	—
Deficit accumulated during the development stage	(146,484)	(146,484)	(146,484)
Total stockholders' (deficit) equity	(139,252)	4,310	56,096

(1) The pro forma column in the consolidated balance sheet data above gives effect to the conversion of all outstanding shares of our convertible preferred stock outstanding as of June 30, 2014 into an aggregate of 7,807,593 shares of our common stock upon completion of this offering.

(2) The pro forma as adjusted column in the consolidated balance sheet data above gives additional effect to the sale of 4,300,000 shares of common stock in this offering at an assumed initial public offering price of $14.00 per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, as if the sale of the shares in this offering had occurred as of June 30, 2014.

Each $1.00 increase (decrease) in the assumed initial public offering price of $14.00 per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase (decrease) each of cash and cash equivalents, working capital, total assets and total stockholders' (deficit) equity by approximately $4.0 million, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. Each increase (decrease) of 1.0 million shares in the number of shares offered by us would increase (decrease) each of cash and cash equivalents, working capital, total assets and total stockholders' (deficit) equity by approximately $13.0 million, assuming that the assumed initial public offering price remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. The pro forma as adjusted information discussed above is illustrative only and will adjust based on the actual initial public offering price and other terms of this offering determined at pricing.

RISK FACTORS

Investing in our common stock involves a high degree of risk. Before making your decision to invest in shares of our common stock, you should carefully consider the risks described below, together with the other information contained in this prospectus, including our financial statements and the related notes appearing at the end of this prospectus. We cannot assure you that any of the events discussed below will not occur. These events could have a material and adverse impact on our business, results of operations, financial condition and cash flows. If that were to happen, the trading price of our common stock could decline, and you could lose all or part of your investment.

Risks Related to Our Financial Position and Capital Needs

We have incurred net losses since our inception and anticipate that we will continue to incur net losses for the foreseeable future.

Investment in biopharmaceutical product development is highly speculative because it entails substantial upfront capital expenditures and significant risk that any potential product candidate will fail to demonstrate adequate efficacy or an acceptable safety profile, gain regulatory approval or be commercially viable. We have a limited operating history. We have no products approved for commercial sale and have not generated any revenue to date, and we continue to incur significant research and development and other expenses related to our ongoing operations and clinical development of entinostat. As a result, we are not and have never been profitable and have incurred losses in each period since our inception in 2005. For the year ended December 31, 2013 and the six months ended June 30, 2014, we reported a net loss of $14.2 million and $8.5 million, respectively. As of June 30, 2014, we had an accumulated deficit of $146.5 million.

We expect to continue to incur significant losses for the foreseeable future, and we expect these losses to increase as we continue our research and development of, and seek regulatory approvals for, entinostat. We may also encounter unforeseen expenses, difficulties, complications, delays and other unknown factors that may adversely affect our business. The size of our future net losses will depend, in part, on the rate of future growth of our expenses and our ability to generate revenues, if any. Our prior losses and expected future losses have had and will continue to have an adverse effect on our stockholders' equity and working capital.

We currently have no source of product revenue and may never achieve or maintain profitability.

Our ability to generate product revenue and become profitable depends upon our ability to successfully commercialize entinostat. We do not anticipate generating revenue from the sale of entinostat for the foreseeable future. Our ability to generate future product revenue from entinostat also depends on a number of additional factors, including, but not limited to, our ability to:

- successfully complete the research and clinical development of, and receive regulatory approval for, entinostat;
- launch, commercialize and achieve market acceptance of entinostat, and if launched independently, successfully establish a sales, marketing and distribution infrastructure;
- establish and maintain supplier and manufacturing relationships with third parties, and ensure adequate and legally compliant manufacturing of bulk drug substances and drug products to maintain that supply;

- obtain coverage and adequate product reimbursement from third-party payors, including government payors;
- establish, maintain and protect our intellectual property rights; and
- attract, hire and retain additional qualified personnel.

In addition, because of the numerous risks and uncertainties associated with the development of a new chemical entity, including that entinostat may not achieve the endpoints of applicable trials, we are unable to predict the timing or amount of increased expenses, and if or when we will achieve or maintain profitability. In addition, our expenses could increase beyond expectations if we decide to or are required by the U.S. Food and Drug Administration, or FDA, or foreign regulatory authorities to perform studies or trials in addition to those that we currently anticipate. Even if we complete the development and regulatory processes described above, we anticipate incurring significant costs associated with launching and commercializing entinostat and any other product candidates we may develop.

Even if we generate revenues from the sale of entinostat, we may not become profitable and may need to obtain additional funding to continue operations. If we fail to become profitable or do not sustain profitability on a continuing basis, then we may be unable to continue our operations at planned levels and be forced to reduce our operations or even shut down.

We will require additional capital to finance our planned operations, which may not be available to us on acceptable terms, or at all. As a result, we may not complete the development and commercialization of entinostat or develop new product candidates.

Our operations have consumed substantial amounts of cash since inception, primarily due to our research and development efforts. We expect our research and development expenses to increase substantially in connection with our ongoing and planned activities, particularly as we advance entinostat into a pivotal Phase 3 clinical trial in hormone receptor positive, or HR-positive, locally advanced or metastatic breast cancer.

We believe that the net proceeds from this offering, together with our existing cash and cash equivalents, and the amounts available for borrowing under the term loan facility with Solar Capital Ltd., will fund our projected operating expenses and capital expenditure requirements through mid-2017. In addition, we expect to have received progression-free survival, or PFS, data from the planned Phase 3 clinical trial of entinostat in mid-2017 sufficient to determine whether or not such data demonstrates improvement in PFS, the trial's primary endpoint.

We will need to access additional capital to fund our operations subsequent to mid-2017. If we fail to obtain PFS data from the planned Phase 3 clinical trial in the time frame currently expected or if such data does not demonstrate PFS improvement, we may be unable to raise additional capital to fund our operations on acceptable terms, or at all.

In addition, in order to conduct a Phase 2 clinical trial to further study our epithelial cadherin biomarker enrichment strategy in lung cancer, we will need to raise additional capital.

Unexpected circumstances may cause us to consume capital more rapidly than we currently anticipate. For example, as we and our collaborators move entinostat into the Phase 3 clinical trial, we may discover that more patients need to be enrolled than we currently expect or that we may need to conduct additional activities which exceed our current budget to achieve appropriate rates of patient enrollment, which would increase our development costs.

In any event, we will require additional capital to continue the development of, obtain regulatory approval for, and to commercialize, entinostat. Any efforts to secure additional financing may divert our management from our day-to-day activities, which may adversely affect our ability to develop and commercialize entinostat. In addition, we cannot guarantee that future financing will be available in sufficient amounts or on terms acceptable to us, if at all. If we do not raise additional capital when required or on acceptable terms, we may need to:

- delay, scale back or discontinue the development or commercialization of entinostat or cease operations altogether;
- seek strategic alliances for entinostat on terms less favorable than might otherwise be available; or
- relinquish, or license on unfavorable terms, our rights to technologies or any future product candidates that we otherwise would seek to develop or commercialize ourselves.

If we need to conduct additional fundraising activities and we do not raise additional capital in sufficient amounts or on terms acceptable to us, we may be prevented from pursuing development and commercialization efforts, which will have a material adverse effect on our business, operating results and prospects.

Our future funding requirements, both short- and long-term, will depend on many factors, including:

- the initiation, progress, timing, costs and results of clinical trials for entinostat;
- the outcome, timing and cost of seeking and obtaining regulatory approvals from the FDA and comparable foreign regulatory authorities, including the potential for such authorities to require that we perform more trials than we currently expect;
- the cost to establish, maintain, expand and defend the scope of our intellectual property portfolio, including the amount and timing of any payments we may be required to make, or that we may receive, in connection with licensing, preparing, filing, prosecuting, defending and enforcing any patents or other intellectual property rights;
- market acceptance of entinostat;
- the cost and timing of selecting, auditing and developing product-specific manufacturing capabilities, and potentially validating manufacturing sites for commercial-scale manufacturing;
- the cost and timing for obtaining pricing and reimbursement, which may require additional trials to address pharmacoeconomic benefit;
- the cost of establishing sales, marketing and distribution capabilities for entinostat if entinostat receives regulatory approval and we determine to commercialize it ourselves;
- the costs of acquiring, licensing or investing in additional businesses, products, product candidates and technologies;
- the effect of competing technological and market developments; and
- our need to implement additional internal systems and infrastructure, including financial and reporting systems, as we become a public company.

If we cannot expand our operations or otherwise capitalize on our business opportunities because we cannot secure sufficient capital, our business, financial condition and results of operations could be materially adversely affected.

Our recurring operating losses have raised substantial doubt regarding our ability to continue as a going concern.

Our recurring operating losses raise substantial doubt about our ability to continue as a going concern. As a result, our independent registered public accounting firm included an explanatory paragraph in its report on our consolidated financial statements as of and for the year ended December 31, 2013. We have no current source of revenue to sustain our present activities, and we do not expect to generate revenue until, and unless, we receive regulatory approval of and successfully commercialize entinostat. Accordingly, our ability to continue as a going concern will require us to obtain additional financing to fund our operations. Our inability to continue as a going concern may make it more difficult for us to obtain financing for the continuation of our operations and could result in the loss of confidence by investors, suppliers and employees.

Risks Related to Our Business and Industry

Entinostat is our only product candidate. If we are unable to successfully complete clinical development of, obtain regulatory approval for and commercialize entinostat, our business prospects will be significantly harmed.

Entinostat is currently our only product candidate. Our financial success will depend substantially on our ability to effectively and profitably commercialize entinostat. In order to commercialize entinostat, we will be required to obtain regulatory approvals by establishing that it is sufficiently safe and effective. The clinical and commercial success of entinostat will depend on a number of factors, including the following:

- agreement with the FDA and comparable foreign regulatory authorities about the design or implementation of the Phase 3 clinical trial;
- timely completion of the planned Phase 3 clinical trial, which may be significantly slower than we currently anticipate and will depend substantially upon the satisfactory performance of the Eastern Cooperative Oncology Group – American College of Radiology Imaging Network Cancer Research Group, or ECOG-ACRIN, and the National Cancer Institute, or NCI, and other third-party contractors;
- the ability to demonstrate entinostat's safety and efficacy for its proposed indication through clinical trials to the satisfaction of the FDA and comparable foreign regulatory authorities;
- whether we are required by the FDA or comparable foreign regulatory authorities to conduct additional clinical trials;
- the prevalence and severity of adverse side effects;
- the timely receipt of necessary marketing approvals from the FDA and comparable foreign regulatory authorities;
- achieving and maintaining compliance with all regulatory requirements applicable to entinostat;
- the availability, perceived advantages, relative cost, relative safety and relative efficacy of alternative and competing treatments;
- the effectiveness of our own or our potential strategic collaborators' marketing, sales and distribution strategy and operations in the United States and abroad;
- the ability of our third-party manufacturers to produce trial supplies of entinostat and to develop, validate and maintain a commercially viable manufacturing process that is compliant with current Good Manufacturing Practices, or cGMP;

- the availability of commercial supplies of exemestane to support the marketing of the entinostat therapy as a component of a combination drug regimen with exemestane;
- our ability to successfully commercialize entinostat in the United States and abroad, whether alone or in collaboration with others; and
- our ability to enforce our intellectual property rights in and to entinostat.

If we fail to obtain regulatory approval for, or are unable to successfully commercialize, entinostat, we will have no other product candidates to rely on. In addition, we will not be able to generate product sales, which will have a material adverse effect on our business and our prospects.

Although the NCI has entered into a Special Protocol Assessment agreement with the FDA relating to the pivotal Phase 3 clinical trial of entinostat, this agreement does not guarantee any particular outcome with respect to regulatory review of the pivotal trial or with respect to regulatory approval of entinostat.

The protocol for the pivotal Phase 3 trial of entinostat in HR-positive locally advanced or metastatic breast cancer was reviewed and agreed upon by the FDA under a Special Protocol Assessment, or SPA, agreement with the NCI in January 2014. The SPA agreement allows for FDA evaluation of whether a clinical trial protocol could form the primary basis of an efficacy claim in support of an NDA. The SPA is an agreement that a Phase 3 clinical trial's design, clinical endpoints, patient population and statistical analyses are sufficient to support the efficacy claim. Agreement on the SPA is not a guarantee of approval, and there is no assurance that the design of, or data collected from, the trial will be adequate to obtain the requisite regulatory approval. Further, the SPA is not binding on the FDA if public health concerns unrecognized at the time the SPA was entered into become evident or other new scientific concerns regarding product safety or efficacy arise. In addition, upon written agreement of both the FDA and the NCI, the SPA may be changed, and the FDA retains significant latitude and discretion in interpreting the terms of the SPA and any resulting trial data. As a result, we do not know how the FDA will interpret the parties' respective commitments under the SPA, how it will interpret the data and results from the pivotal Phase 3 clinical trial, whether the FDA will require that we conduct or complete one or more additional clinical trials to support potential approval or whether entinostat will receive any regulatory approvals. ECOG-ACRIN, with sponsorship and funding support from the NCI, will conduct the pivotal Phase 3 clinical trial, which began enrollment in the second quarter of 2014.

If the planned Phase 3 clinical trial of entinostat in HR-positive locally advanced or metastatic breast cancer patients fails to demonstrate safety and efficacy to the satisfaction of regulatory authorities or does not otherwise produce positive results, we may incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of entinostat.

Before obtaining marketing approval from regulatory authorities for the sale of entinostat, we or our collaborators must conduct extensive trials to demonstrate the safety and efficacy of the entinostat in humans. We have entered into an arrangement with ECOG-ACRIN to conduct the planned Phase 3 clinical trial of entinostat in HR-positive locally advanced or metastatic breast cancer for registration. The trial will measure statistically significant improvement in each of the two primary endpoints of PFS and overall survival. We expect to receive data with respect to PFS in mid-2017 sufficient to determine whether the Phase 3 clinical trial has met the primary endpoint for PFS, and we expect to receive data with respect to overall survival in the second half of 2019 sufficient to determine whether the Phase 3 clinical trial met the primary endpoint

for overall survival. If the Phase 3 clinical trial meets the PFS endpoint and the interim analysis of overall survival is favorable, we expect to submit a New Drug Application, or NDA, based on this data. However, if the trial does not meet the PFS endpoint, we will not be able to submit an NDA unless and until we receive data demonstrating that the primary endpoint for overall survival has been achieved and the FDA indicates this can support approval in spite of not meeting the PFS endpoint, neither of which may occur at all.

Despite the results reported in our Phase 2b clinical trial for entinostat in estrogen receptor positive, or ER+, locally advanced or metastatic breast cancer, we do not know whether the planned Phase 3 clinical trial in HR-positive locally advanced or metastatic breast cancer will demonstrate adequate efficacy and safety to result in regulatory approval to market entinostat in any particular cancer indications or jurisdiction. Additionally, while we do not expect that there will be overlapping toxicities between entinostat and exemestane, we cannot be certain that we will not observe these toxicities or unexpected side effects in the Phase 3 clinical trial.

Clinical testing is expensive and difficult to design and implement, can take many years to complete and is inherently uncertain as to the outcome. A failure of one or more trials can occur at any stage of testing. The outcome of preclinical studies and early clinical trials may not accurately predict the success of later trials, and interim results of a trial do not necessarily predict final results. A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in advanced trials due to lack of efficacy or unacceptable safety profiles, notwithstanding promising results in earlier trials.

The failure of ECOG-ACRIN to adequately perform its obligations and responsibilities in the conduct of the Phase 3 clinical trial or to meet expected deadlines could substantially harm our business because we may not obtain regulatory approval for or commercialize entinostat in a timely manner or at all.

We have entered into an arrangement with ECOG-ACRIN, pursuant to which it, with sponsorship and funding support by the NCI, will conduct the Phase 3 clinical trial of entinostat in combination with exemestane in HR-positive locally advanced or metastatic breast cancer patients. While we intend to provide additional operational and logistical support for the trial, we will have limited control of their activities. We cannot control whether or not ECOG-ACRIN will devote sufficient time and resources to the trial, including as a result of any reduction or delay in government funding or sponsorship of the activities of ECOG-ACRIN or the NCI. If ECOG-ACRIN does not successfully carry out its obligations and responsibilities or meet expected deadlines or if the quality or accuracy of the clinical data it obtains is compromised due to the failure to adhere to clinical protocols, regulatory requirements or for other reasons, the Phase 3 clinical trial may be extended, delayed or terminated, and we may not be able to obtain regulatory approval for, or successfully commercialize, entinostat. As a result, our results of operations and the commercial prospects for entinostat would be harmed, our costs could increase and our ability to generate revenues could be delayed.

Although the Phase 3 clinical trial is being conducted by ECOG-ACRIN, we are responsible for ensuring that each of our trials is conducted in accordance with the applicable protocol and legal, regulatory and scientific standards, and our reliance on ECOG-ACRIN does not relieve us of our regulatory responsibilities. We are required to comply with Good Clinical Practices, or GCP, which are regulations and guidelines enforced by the FDA, the Competent Authorities of the Member States of the European Economic Area and comparable foreign regulatory authorities for any product in clinical development. Regulatory authorities enforce these GCP through periodic inspections of trial sponsors, principal investigators and clinical trial sites. If we fail to comply with applicable GCP, the clinical data generated in our trials may be deemed unreliable and the FDA or

comparable foreign regulatory authorities may require us to perform additional trials before approving our marketing applications. We cannot assure you that upon inspection by a given regulatory authority, such regulatory authority will determine that any of our trials comply with GCP requirements. In addition, we must conduct our trials with products produced under cGMP requirements. Failure to comply with any of these regulations may require us to repeat preclinical and clinical trials, which would delay the regulatory development process.

If there are delays in completing the Phase 3 clinical trial for entinostat in HR-positive locally advanced or metastatic breast cancer, we will be delayed in commercializing entinostat, our development costs may increase and our business may be harmed.

The planned Phase 3 clinical trial of entinostat in HR-positive locally advanced or metastatic breast cancer commenced in the second quarter of 2014 and we expect to have PFS data from this trial in mid-2017. However, we do not know whether this trial will need to be restructured, or will be completed on schedule or at all. Our product development costs will increase if we experience delays in clinical testing. Significant trial delays also could shorten any periods during which we may have the exclusive right to commercialize entinostat or allow our competitors to bring products to market before we do, which would impair our ability to successfully capitalize on entinostat and may harm our business, results of operations and prospects. Events which may result in a delay or unsuccessful completion of clinical development of entinostat include, among other things:

- delays or failure in reaching an agreement with other regulatory authorities on a trial design that ECOG-ACRIN is able to execute;
- delays or failure in obtaining approval for clinical trial sites by institutional review boards, or IRBs;
- feedback from the FDA and comparable foreign regulatory authorities, IRBs or the data safety monitoring board, or results from concurrent clinical studies, that might require modification to the protocol;
- imposition of a clinical hold following an inspection of the trial operations or clinical trial sites by the FDA or other regulatory authorities, or decision by the FDA, other regulatory authorities, IRBs or the company, or a recommendation by a data safety monitoring board, to suspend or terminate trials at any time for safety issues or for any other reason;
- delays in reaching agreement on acceptable terms with prospective contract research organizations, or CROs, and clinical trial sites;
- deviations from the trial protocol by clinical trial sites and investigators, or failing to conduct the trial in accordance with regulatory requirements;
- failure of third parties, such as ECOG-ACRIN or CROs, to satisfy their contractual duties or meet expected deadlines;
- delays in the testing, validation, manufacturing and delivery of entinostat to the clinical trial sites;
- for trials in selected patient populations, delays in identification and auditing of central or other laboratories and the transfer and validation of assays or tests to be used to identify selected patients;
- delays in having patients complete participation in a trial or return for post-treatment follow-up;

- delays caused by patients dropping out of a trial due to side effects or disease progression;
- unacceptable risk-benefit profile or unforeseen safety issues or adverse side effects;
- failure to demonstrate a benefit from using a drug;
- inability to identify and maintain a sufficient number of clinical trial sites, many of which may already be engaged in other clinical trial programs, including some that may be for the same indication;
- withdrawal of clinical trial sites from our clinical trials as a result of changing standards of care or the ineligibility of a site to participate in our trials; or
- changes in government regulations or administrative actions or lack of adequate funding to continue the trials.

An inability by us to timely complete clinical development could result in additional costs to us or impair our ability to generate product revenues or development, regulatory, commercialization and sales milestone payments and royalties on product sales.

If we are or our collaborators are unable to enroll patients in trials, we will be unable to complete these trials on a timely basis.

The timely completion of trials largely depends on patient enrollment. ECOG-ACRIN may not be able to continue trials for entinostat if it is unable to locate and enroll a sufficient number of eligible patients. There is significant competition for recruiting eligible patients in trials, and ECOG-ACRIN may be unable to enroll the patients in these trials as required by the FDA or a comparable foreign regulatory authority that we need to complete the Phase 3 clinical trial on a timely basis or at all. In particular, less than 1% of cancer patients enroll in trials.

Many factors affect patient enrollment, including:

- the size and nature of the patient population;
- the number and location of clinical trial sites enrolled;
- competition with other organizations or our own clinical trials for clinical trial sites or patients;
- the eligibility and exclusion criteria for the trial;
- the design of the trial;
- inability to obtain and maintain patient consents;
- risk that enrolled subjects will drop out before completion; and
- competing trials and clinicians' and patients' perceptions as to the potential advantages of the drug being studied in relation to other available therapies, including any new drugs that may be approved for the indications we are investigating.

The Phase 3 clinical trial of entinostat is designed solely to evaluate entinostat as part of a combination therapy with exemestane for the treatment of HR-positive locally advanced or metastatic breast cancer. We will be required to expend significant additional resources to develop and commercialize entinostat for any other indications with other chemotherapies or as a monotherapy.

We are primarily developing entinostat for use as a combination therapy with exemestane for the treatment of HR-positive locally advanced or metastatic breast cancer. Entinostat may

not demonstrate any clinical benefits for use in combination with other chemotherapies or in other indications. Moreover, it may be several years, if ever, before we are in a position to rigorously pursue entinostat for use in combination with other chemotherapies or in other cancer indications. We cannot change our development focus for entinostat without expending significant additional resources, and any such change in focus would cause significant delays in our ability to obtain regulatory approval for entinostat, which would materially harm our business. We would need to expend significant resources to develop entinostat for monotherapeutic uses, and any such development would take a considerable amount of our time and may not prove successful.

The regulatory approval processes of the FDA and comparable foreign regulatory authorities are lengthy, time-consuming and inherently unpredictable. Our inability to obtain regulatory approval for entinostat would substantially harm our business.

The time required to obtain approval by the FDA and comparable foreign regulatory authorities is unpredictable, but typically takes many years following the commencement of preclinical studies and clinical trials and depends upon numerous factors, including the substantial discretion of the regulatory authorities. In addition, approval policies, regulations, or the type and amount of clinical data necessary to gain approval may change during the course of a product candidate's clinical development and may vary among jurisdictions. We have not obtained regulatory approval for entinostat or any other product candidate, and it is possible that we will never obtain regulatory approval for entinostat or any future product candidates.

Entinostat could fail to receive regulatory approval from the FDA or a comparable foreign regulatory authority for many reasons, including but not limited to:

- failure to demonstrate that entinostat is safe and effective;
- failure of trials to meet the primary endpoints or level of statistical significance required for approval;
- failure to demonstrate that entinostat's clinical and other benefits outweigh any safety risks;
- disagreement with our interpretation of data from preclinical studies or clinical trials;
- disagreement with the design or implementation of our or our collaborators' trials;
- the insufficiency of data collected from trials of entinostat to support the submission and filing of an NDA or other submission or to obtain regulatory approval;
- failure to obtain approval of the manufacturing and testing processes or facilities of third-party manufacturers with whom we contract for clinical and commercial supplies;
- receipt of a negative opinion from an advisory committee due to a change in the standard of care regardless of the outcome of the clinical trials; or
- changes in the approval policies or regulations that render our preclinical and clinical data insufficient for approval.

The FDA or a comparable foreign regulatory authority may require more information, including additional preclinical or clinical data, to support approval, which may delay or prevent approval and our commercialization plans, or may cause us to decide to abandon our development program. Even if we were to obtain approval, regulatory authorities may approve entinostat for a more limited patient population than we request, may grant approval contingent on the performance of costly post-marketing trials, may impose a Risk Evaluation and Mitigation

Strategy, or REMS, or a comparable foreign regulatory authority may require the establishment or modification of a similar strategy that may, for instance, restrict distribution of entinostat and impose burdensome implementation requirements on us, or may approve it with a label that does not include the labeling claims necessary or desirable for the successful commercialization of entinostat, all of which could limit our ability to successfully commercialize our drug products.

A shortage in the supply of exemestane, or other therapeutics, could increase our costs and adversely affect our ability to commercialize entinostat.

Cancer drugs have from time to time been in short supply and, because many or all of these cancer drugs are also widely used in cancer treatment currently, we will compete with a broad range of healthcare providers and other companies for the supply of those drugs. Any shortage of exemestane could adversely affect our ability to timely conduct the Phase 3 clinical trial in HR-positive locally advanced or metastatic breast cancer and, if entinostat receives regulatory approval, to commercialize entinostat for treatment of HR-positive locally advanced or metastatic breast cancer. A shortage of supply may also result in an increase, which could be significant, in our costs of procuring exemestane.

Entinostat may not achieve adequate market acceptance among physicians, patients, healthcare payors and others in the medical community to be commercially successful.

Even if entinostat receives regulatory approval, it may not gain sufficient market acceptance among physicians, patients, healthcare payors and others in the medical community. Our commercial success also depends on coverage and adequate reimbursement of entinostat by third-party payors, including government payors, which may be difficult or time-consuming to obtain, may be limited in scope and may not be obtained in all jurisdictions in which we may seek to market entinostat. The degree of market acceptance of entinostat will depend on a number of factors, including:

- the efficacy and safety profile as demonstrated in trials;
- the timing of market introduction as well as competitive products;
- the clinical indications for which entinostat is approved;
- acceptance of entinostat as a safe and effective treatment by physicians, clinics and patients;
- the potential and perceived advantages of entinostat over alternative treatments, including any similar generic treatments;
- the cost of treatment in relation to alternative treatments;
- the availability of coverage and adequate reimbursement and pricing by third parties and government authorities;
- relative convenience and ease of administration;
- the frequency and severity of adverse events;
- the effectiveness of sales and marketing efforts; and
- unfavorable publicity relating to entinostat.

If entinostat is approved but does not achieve an adequate level of acceptance by physicians, hospitals, healthcare payors and patients, we may not generate sufficient revenue to become or remain profitable.

We rely on third-party suppliers to manufacture and distribute our clinical drug supplies for entinostat, we intend to rely on third parties for commercial manufacturing and distribution of entinostat and we expect to rely on third parties for manufacturing and distribution of preclinical, clinical and commercial supplies of any future product candidates.

We do not currently have, nor do we plan to acquire, the infrastructure or capability to manufacture or distribute preclinical, clinical or commercial quantities of drug substance or drug product, including entinostat. Initially, Bayer Pharma AG (formerly known as Bayer Schering Pharma AG), or Bayer, manufactured and supplied our requirements of entinostat, but effective May 2012, manufacturing responsibility for entinostat was transferred by mutual agreement to us. We are in the process of transferring manufacturing technology from Bayer to our clinical manufacturing organizations, or CMOs. Our CMOs have never made entinostat before. If our CMOs experience delays or problems in manufacturing entinostat, the commencement or conduct of the Phase 3 clinical trial will be delayed.

While we expect to continue to depend on third-party contract manufacturers for the foreseeable future, we do not have direct control over the ability of these manufacturers to maintain adequate manufacturing capacity and capabilities to serve our needs, including quality control, quality assurance and qualified personnel. We are dependent on our contract manufacturers for compliance with cGMPs and for manufacture of both active drug substances and finished drug products. Facilities used by our contract manufacturers to manufacture drug substance and drug product for commercial sale must be approved by the FDA or other relevant foreign regulatory agencies pursuant to inspections that will be conducted after we submit our NDA or relevant foreign regulatory submission to the applicable regulatory agency. If our contract manufacturers cannot successfully manufacture materials that conform to our specifications and/or the strict regulatory requirements of the FDA or foreign regulatory agencies, they will not be able to secure and/or maintain regulatory approval for their manufacturing facilities. Furthermore, these contract manufacturers are engaged with other companies to supply and/or manufacture materials or products for such companies, which also exposes our manufacturers to regulatory risks for the production of such materials and products. As a result, failure to meet the regulatory requirements for the production of those materials and products may also affect the regulatory clearance of a contract manufacturers' facility. If the FDA or a comparable foreign regulatory agency does not approve these facilities for the manufacture of entinostat, or if it withdraws its approval in the future, we may need to find alternative manufacturing facilities, which would impede or delay our ability to develop, obtain regulatory approval for or market entinostat, if approved.

A Breakthrough Therapy designation by the FDA for entinostat may not lead to a faster development or regulatory review or approval process, and it does not necessarily increase the likelihood that entinostat will receive marketing approval.

We have received Breakthrough Therapy designation for entinostat. A breakthrough therapy is defined as a drug that is intended, alone or in combination with one or more other drugs, to treat a serious or life-threatening disease or condition, and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints. Entinostat received a Breakthrough Therapy designation from the FDA based on results from our completed Phase 2b clinical trial in ER+ locally recurrent or metastatic breast cancer showing statistically significant improvements in PFS, the primary endpoint, and overall survival, an exploratory endpoint. However, the FDA noted that the improvement in PFS was modest and that there was no difference in objective response rates between treatment arms. Receipt of a Breakthrough Therapy designation for a drug candidate may not result in a faster development process or review compared to drugs

considered for approval under conventional FDA procedures and does not assure ultimate approval by the FDA. In addition, the FDA may later decide that entinostat no longer meets the conditions for qualification or decide that the time period for FDA review will not be shortened. For instance, if results from the Phase 3 clinical trial do not confirm the improvements in PFS and overall survival observed in our Phase 2b clinical trial, the FDA may rescind our Breakthrough Therapy designation.

Even if entinostat receives regulatory approval, it may still face future development and regulatory difficulties.

Even if we obtain regulatory approval for entinostat, it would be subject to ongoing requirements by the FDA and comparable foreign regulatory authorities governing the manufacture, quality control, further development, labeling, packaging, storage, distribution, safety surveillance, import, export, advertising, promotion, recordkeeping and reporting of safety and other post-market information. The FDA and comparable foreign regulatory authorities will continue to closely monitor the safety profile of any product even after approval. If the FDA or comparable foreign regulatory authorities become aware of new safety information after approval of entinostat, they may require labeling changes or establishment of a REMS or similar strategy, impose significant restrictions on its indicated uses or marketing, or impose ongoing requirements for potentially costly post-approval studies or post-market surveillance.

In addition, manufacturers of drug products and their facilities are subject to continual review and periodic inspections by the FDA and other regulatory authorities for compliance with cGMP regulations and standards. If we or a regulatory agency discover previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, a regulatory agency may impose restrictions on that product, the manufacturing facility or us, including withdrawal of the product from the market or suspension of manufacturing, or we may recall the product from distribution. If we, or our manufacturers, fail to comply with applicable regulatory requirements, a regulatory agency may:

- issue warning letters or untitled letters;
- mandate modifications to promotional materials or require us to provide corrective information to healthcare practitioners;
- require us to enter into a consent decree, which can include imposition of various fines, reimbursements for inspection costs, required due dates for specific actions and penalties for noncompliance;
- seek an injunction or impose civil or criminal penalties or monetary fines;
- suspend or withdraw regulatory approval;
- suspend any ongoing clinical studies;
- refuse to approve pending applications or supplements to applications filed by us;
- suspend or impose restrictions on operations, including costly new manufacturing requirements; or
- seize or detain products, or refuse to permit the import or export of products.

The occurrence of any event or penalty described above may inhibit our ability to commercialize and generate revenue from the sale of entinostat.

Advertising and promotion of any product candidate that obtains approval in the United States will be heavily scrutinized by the FDA, the Department of Justice, the Department of Health and Human Services' Office of Inspector General, state attorneys general, members of Congress, other government agencies and the public. Violations, including promotion of our products for unapproved (or off-label) uses, are subject to enforcement letters, inquiries and investigations, and civil and criminal sanctions by the government.

In the United States, engaging in the impermissible promotion of our products for off-label uses can also subject us to false claims litigation under federal and state statutes, which can lead to civil and criminal penalties and fines and agreements that materially restrict the manner in which a company promotes or distributes drug products. These false claims statutes include the federal False Claims Act, under which lawsuits against pharmaceutical companies have increased significantly in volume and breadth in recent years. This has led to several substantial civil and criminal settlements regarding certain sales practices promoting off-label drug uses involving fines in excess of $1.0 billion. This growth in litigation has increased the risk that a pharmaceutical company will have to defend a false claim action, pay settlement fines or restitution, agree to comply with burdensome reporting and compliance obligations, and be excluded from participation in Medicare, Medicaid and other federal and state healthcare programs.

Entinostat may cause undesirable side effects or have other properties that could delay or prevent its regulatory approval, limit the commercial profile of an approved label, or result in significant negative consequences following any marketing approval.

Undesirable side effects caused by entinostat could cause the interruption, delay or halting of the trials and could result in a more restrictive label or the delay or denial of regulatory approval by the FDA or other comparable foreign regulatory authorities. In our Phase 2b clinical trial of entinostat in ER+ locally advanced or metastatic breast cancer, the most significant adverse events were fatigue, gastrointestinal disturbances and hematologic toxicities, all of which occurred in higher numbers than in the placebo group. Results of the Phase 3 clinical trial may reveal a high and unacceptable severity and prevalence of side effects or other unexpected characteristics. In such event, the trials could be suspended or terminated, or the FDA or comparable foreign regulatory authorities could deny approval of entinostat for any or all targeted indications. Drug-related side effects could affect patient recruitment or the ability of enrolled subjects to complete the trial or result in potential product liability claims. Any of these occurrences may significantly harm our business, financial condition and prospects.

Additionally, if entinostat receives marketing approval, and we or others later identify undesirable side effects, a number of potentially significant negative consequences could result, including:

- we may suspend marketing of, or withdraw or recall, entinostat;
- regulatory authorities may withdraw approvals of entinostat;
- regulatory authorities may require additional warnings on the entinostat label;
- the FDA or other regulatory bodies may issue safety alerts, Dear Healthcare Provider letters, press releases or other communications containing warnings about entinostat;
- the FDA may require the establishment or modification of a REMS or a comparable foreign regulatory authority may require the establishment or modification of a similar strategy that may, for instance, restrict distribution of entinostat and impose burdensome implementation requirements on us;

- regulatory authorities may require that we conduct post-marketing studies;
- we could be sued and held liable for harm caused to subjects or patients; and
- our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of entinostat for use in targeted indications or otherwise materially harm its commercial prospects, if approved, and could significantly impair our business, results of operations and prospects.

Our failure to obtain regulatory approval in international jurisdictions would prevent us from marketing entinostat outside the United States.

In order to market and sell entinostat in other jurisdictions, we must obtain separate marketing approvals and comply with numerous and varying regulatory requirements. We may not obtain foreign regulatory approvals on a timely basis, or at all. The approval procedure varies among countries and can involve additional testing. The time required to obtain approval may differ substantially from that required to obtain FDA approval. The regulatory approval process outside the United States generally includes all of the risks associated with obtaining FDA approval. In addition, in many countries outside the United States, product reimbursement approvals must be secured before regulatory authorities will approve the product for sale in that country. The process of obtaining foreign regulatory approvals and ensuring compliance with foreign regulatory requirements may result in significant delays, difficulties and costs for us and could delay or prevent the introduction of entinostat in certain countries. Further, trials conducted in one country may not be accepted by regulatory authorities in other countries and regulatory approval in one country does not ensure approval in any other country, while a failure or delay in obtaining regulatory approval in one country may have a negative effect on the regulatory approval process in others. For example, based on scientific advice from the European Medicines Agency, we believe our current clinical development plan is likely to be insufficient to receive regulatory approval in Europe. Our failure to obtain approval of entinostat by regulatory authorities in another country may significantly diminish the commercial prospects of that product candidate and our business prospects could decline.

We face substantial competition, which may result in others discovering, developing or commercializing products before or more successfully than us.

There are numerous approved therapies for treating breast and lung cancers. Many of these approved drugs are well-established therapies or products and are widely accepted by physicians, patients and third-party payors. Some of these drugs are branded and subject to patent protection, and others are available on a generic basis. Insurers and other third-party payors may encourage the use of generic products or specific branded products. We expect that if entinostat is approved, it will be priced at a significant premium over competitive generic products. This pricing premium may make it difficult for us to differentiate entinostat from currently approved therapies and impede adoption of our product, which may adversely impact our business strategy. In addition, many companies are developing new therapeutics, and we cannot predict what the standard of care will be as entinostat continues in clinical development.

If entinostat in combination with exemestane were approved for the treatment of HR-positive locally advanced or metastatic breast cancer, it would face competition from currently approved and marketed products, such as everolimus. Further competition could arise from products currently in development, including Pfizer Inc.’s palbociclib, which is currently in Phase 3 clinical testing in first-line HR-positive locally advanced or metastatic breast cancer, and Novartis Oncology Global’s buparlisib, which is currently in Phase 3 clinical testing in HR-positive locally advanced or metastatic breast cancer.

We believe that our ability to successfully compete will depend on, among other things:

- the efficacy and safety profile of entinostat relative to marketed products and product candidates in development by third parties;
- the time it takes for entinostat to complete clinical development and receive marketing approval;
- our ability to commercialize entinostat if it receives regulatory approval;
- the price of entinostat, including in comparison to branded or generic competitors;
- whether coverage and adequate levels of reimbursement are available under private and governmental health insurance plans, including Medicare;
- our ability to manufacture commercial quantities of entinostat if it receives regulatory approval; and
- acceptance of entinostat in combination with exemestane by physicians and other healthcare providers.

In addition, the biopharmaceutical industry is intensely competitive and subject to rapid and significant technological change. We face competition from major pharmaceutical companies, specialty pharmaceutical companies and biotechnology companies worldwide with respect to entinostat and will face competition with respect to any future product candidates. Many of our competitors have significantly greater financial, technical and human resources. Smaller and early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

Our competitors may obtain regulatory approval of their products more rapidly than we may or may obtain patent protection or other intellectual property rights that limit our ability to develop or commercialize entinostat. Our competitors may also develop drugs that are more effective, more convenient, more widely used and less costly or have a better safety profile than our products and these competitors may also be more successful than us in manufacturing and marketing their products.

Our competitors will also compete with us in recruiting and retaining qualified scientific, management and commercial personnel, establishing clinical trial sites and patient registration for trials, as well as in acquiring technologies complementary to, or necessary for, our programs.

We must attract and retain additional highly skilled employees in order to succeed.

To succeed, we must recruit, retain, manage and motivate qualified clinical, scientific, technical and management personnel and we face significant competition for experienced personnel. If we do not succeed in attracting and retaining qualified personnel, particularly at the management level, it could adversely affect our ability to execute our business plan and harm our operating results. In particular, the loss of one or more of our executive officers could be detrimental to us if we cannot recruit suitable replacements in a timely manner. The competition for qualified personnel in the pharmaceutical industry is intense and as a result, we may be unable to continue to attract and retain qualified personnel necessary for the development of our business or to recruit suitable replacement personnel.

Many of the other pharmaceutical companies that we compete against for qualified personnel have greater financial and other resources, different risk profiles and a longer history in the industry than we do. They also may provide more diverse opportunities and better

chances for career advancement. Some of these characteristics may be more appealing to high-quality candidates than what we have to offer. If we are unable to continue to attract and retain high-quality personnel, the rate and success at which we can discover and develop product candidates and our business will be limited.

Even if we commercialize entinostat, it or any other product candidates that we develop may become subject to unfavorable pricing regulations, third-party coverage or reimbursement practices or healthcare reform initiatives, which could harm our business.

Our ability to commercialize entinostat, or any other product candidates that we develop, successfully also will depend in part on the extent to which coverage and adequate reimbursement for these products and related treatments will be available from government healthcare programs, private health insurers, managed care plans and other organizations. Government authorities and other third-party payors, such as private health insurers and health maintenance organizations, determine which medications they will cover and establish reimbursement levels. Government authorities and other third-party payors have attempted to control costs by limiting coverage and the amount of reimbursement for particular medications. Increasingly, third-party payors are requiring that drug companies provide them with predetermined discounts from list prices and are challenging the prices charged for medical products. We cannot be sure that coverage and reimbursement will be available for any product that we commercialize and, if reimbursement is available, what the level of reimbursement will be. Limitation on coverage and reimbursement may impact the demand for, or the price of, and our ability to successfully commercialize entinostat or any other product candidates that we develop.

There may be significant delays in obtaining coverage and reimbursement for newly approved drugs, and coverage may be more limited than the indications for which the drug is approved by the FDA or comparable foreign regulatory authorities. Moreover, eligibility for coverage and reimbursement does not imply that a drug will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution expenses. Interim reimbursement levels for new drugs, if applicable, may also not be sufficient to cover our costs and may only be temporary. Reimbursement rates may vary according to the use of the drug and the clinical setting in which it is used, may be based on reimbursement levels already set for lower cost drugs and may be incorporated into existing payments for other services. Net prices for drugs may be reduced by mandatory discounts or rebates required by government healthcare programs or private payors and by any future relaxation of laws that presently restrict imports of drugs from countries where they may be sold at lower prices than in the United States. Our inability to promptly obtain coverage and adequate reimbursement rates from both government-funded and private payors for any approved products that we develop could have a material adverse effect on our operating results, our ability to raise capital needed to commercialize products and our overall financial condition.

The regulations that govern marketing approvals, coverage and reimbursement for new drug products vary widely from country to country. Current and future legislation may significantly change the approval requirements in ways that could involve additional costs and cause delays in obtaining approvals. Some countries require approval of the sale price of a drug before it can be marketed. In many countries, the pricing review period begins after marketing or product licensing approval is granted. In some foreign markets, prescription pharmaceutical pricing remains subject to continuing governmental control even after initial approval is granted. As a result, we may obtain marketing approval for entinostat in a particular country, but be subject to price regulations that delay our commercial launch of the product, possibly for lengthy time periods, which could negatively impact the revenues we generate from the sale of

entinostat in that particular country. Adverse pricing limitations may hinder our ability to recoup our investment even if entinostat obtains marketing approval.

There can be no assurance that entinostat, if it is approved for sale in the United States or in other countries, will be considered medically reasonable and necessary for a specific indication, that it will be considered cost-effective by third-party payors, that coverage and an adequate level of reimbursement will be available, or that third-party payors' reimbursement policies will not adversely affect our ability to sell entinostat profitably.

We do not currently have any sales, marketing or distribution experience or infrastructure.

In order to market entinostat or any other approved product candidate in the future, we must build our sales, marketing, managerial and other non-technical capabilities or make arrangements with third parties to perform these services, as we do not presently have such capabilities. To develop our internal sales, distribution and marketing capabilities, we would have to invest significant amounts of financial and management resources in the future. For drugs where we decide to perform sales, marketing and distribution functions ourselves, we could face a number of challenges, including that:

- we may not be able to attract and build a significant marketing or sales force;
- the cost of establishing, training and providing regulatory oversight for a marketing or sales force may not be justifiable in light of the revenues generated by any particular product;
- our direct or indirect sales and marketing efforts may not be successful; and
- there are significant legal and regulatory risks in drug marketing and sales that we have never faced, and any failure to comply with all legal and regulatory requirements for sales, marketing and distribution could result in enforcement action by the FDA or other authorities that could jeopardize our ability to market the product or could subject us to substantial liability.

Alternatively, we may rely on third parties to launch and market our drug candidates, if approved. We may have limited or no control over the sales, marketing and distribution activities of these third parties and our future revenue may depend on the success of these third parties. Additionally, if these third parties fail to comply with all applicable regulatory requirements, the FDA could take enforcement action that could jeopardize our ability to market the drug candidate.

Recently enacted and future legislation may increase the difficulty and cost for us to commercialize entinostat and affect the prices we may obtain.

The United States and many foreign jurisdictions have enacted or proposed legislative and regulatory changes affecting the healthcare system that could prevent or delay marketing approval of entinostat, restrict or regulate post-approval activities and affect our ability to profitably sell any product candidate for which we obtain marketing approval.

In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by legislative initiatives. For example, the Medicare Prescription Drug, Improvement, and Modernization Act of 2003, or Medicare Modernization Act, provides for reimbursement based on average sales prices for physician-administered and certain other drugs under Medicare Part B. In addition, this legislation provided authority for limiting the number of drugs that may be covered in any therapeutic class under the Medicare

Part D program. Changes to the coverage provisions or payment rates established by this legislation could decrease the coverage of and reimbursement rate that we receive for any of our approved products. While the Medicare Modernization Act applies only to reimbursement of drugs under the Medicare program, private payors often follow Medicare coverage policy and payment limitations in setting their own reimbursement rates. Therefore, any reduction in reimbursement that results from changes to Medicare reimbursement rates may result in a similar reduction in payments from non-governmental payors.

In March 2010, President Obama signed into law the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Reconciliation Act of 2010, or, collectively, the Affordable Care Act, which substantially changes the way healthcare is financed by both governmental and private insurers. Among other cost containment measures, the Affordable Care Act establishes an annual, nondeductible fee on any entity that manufactures or imports specified branded prescription drugs and biologic agents, a new Medicare Part D coverage gap discount program, and a new formula that increases the rebates a manufacturer must pay under the Medicaid Drug Rebate Program.

Other legislative changes have been proposed and adopted since the Affordable Care Act was enacted. Pursuant to the Budget Control Act of 2011, as amended, federal budget “sequestration” Medicare payment reductions became effective on April 1, 2013 and automatically reduced payments under various government programs, including, for example, certain aggregate reductions to Medicare provider and supplier reimbursement payments of up to 2% per fiscal year, starting in 2013. In January 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, which, among other things, reduced Medicare payments to several types of providers and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. In the future, there may continue to be additional proposals relating to the reform of the U.S. healthcare system, some of which could further limit the prices we are able to charge for our product candidates, once approved, or the amounts of reimbursement available for our product candidates once they are approved.

We expect that the Affordable Care Act, as well as other healthcare reform measures that have and may be adopted in the future, may result in more rigorous coverage criteria and exert downward pressure on the price that we receive for any approved product, and could harm our future revenues. Any reduction in reimbursement from Medicare or other government programs may result in a similar reduction in payments from private payors. The implementation of cost containment measures or other healthcare reforms may prevent us from being able to generate sufficient revenue, attain profitability or successfully commercialize our products.

Product liability lawsuits against us could cause us to incur substantial liabilities and to limit commercialization of entinostat.

We face an inherent risk of product liability exposure related to the testing of entinostat in human trials and will face an even greater risk if we commercially sell any products that we may develop. Product liability claims may be brought against us by subjects enrolled in our trials, patients, healthcare providers or others using, administering or selling our products. If we cannot successfully defend ourselves against claims that entinostat or other products that we may develop caused injuries, we could incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for entinostat;
- termination of clinical trial sites or entire trial programs;

- injury to our reputation and significant negative media attention;
- withdrawal of trial participants;
- significant costs to defend the related litigation;
- substantial monetary awards to trial subjects or patients;
- diversion of management and scientific resources from our business operations; and
- the inability to commercialize any products that we may develop.

While we currently hold $5.0 million in trial liability insurance coverage, this may not adequately cover all liabilities that we may incur. We also may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise in the future. We intend to expand our insurance coverage for products to include the sale of commercial products if we obtain marketing approval for entinostat, but we may be unable to obtain commercially reasonable product liability insurance. A successful product liability claim or series of claims brought against us, particularly if judgments exceed our insurance coverage, could decrease our cash and adversely affect our business and financial condition.

Our current and future relationships with customers and third-party payors in the United States and elsewhere may be subject, directly or indirectly, to applicable anti-kickback, fraud and abuse, false claims, transparency, health information privacy and security, and other healthcare laws and regulations, which could expose us to criminal sanctions, civil penalties, contractual damages, reputational harm, administrative burdens, and diminished profits and future earnings.

Healthcare providers, physicians and third-party payors in the United States and elsewhere will play a primary role in the recommendation and prescription of any product candidates for which we obtain marketing approval. Our future arrangements with third-party payors and customers may expose us to broadly applicable fraud and abuse and other healthcare laws and regulations, including, without limitation, the federal Anti-Kickback Statute and the federal False Claims Act, which may constrain the business or financial arrangements and relationships through which we market, sell and distribute our products for which we obtain marketing approval. In addition, we may be subject to transparency laws and patient privacy regulation by U.S. federal and state governments and by governments in foreign jurisdictions in which we conduct our business. The applicable federal, state, and foreign healthcare laws and regulations that may affect our ability to operate include:

- the federal Anti-Kickback Statute, which prohibits persons from, among other things, knowingly and willfully soliciting, offering, receiving or paying remuneration, directly or indirectly, in cash or in kind, to induce or reward, or in return for, the referral of an individual for the furnishing or arranging for the furnishing, or the purchase, lease or order, or arranging for or recommending purchase, lease or order, of any good or service for which payment may be made under a federal healthcare program such as Medicare and Medicaid;
- federal civil and criminal false claims laws and civil monetary penalty laws, including the federal False Claims Act, which impose criminal and civil penalties, including through civil whistleblower or qui tam actions, against individuals or entities for, among other things, knowingly presenting, or causing to be presented, to the federal government, including the Medicare and Medicaid programs, claims for payment that are false or fraudulent or making a false statement to avoid, decrease or conceal an obligation to pay money to the federal government;

- the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, which imposes criminal liability for knowingly and willfully executing a scheme to defraud any healthcare benefit program, knowingly and willfully embezzling or stealing from a healthcare benefit program, willfully obstructing a criminal investigation of a healthcare offense, or knowingly and willfully making false statements relating to healthcare matters;
- HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act of 2009 and their respective implementing regulations, which impose obligations on covered healthcare providers, health plans, and healthcare clearinghouses as well as their business associates that create, receive, maintain or transmit individually identifiable health information, for or on behalf of a covered entity with respect to safeguarding the privacy, security and transmission of individually identifiable health information;
- the federal Open Payments program, which requires manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to the Centers for Medicare and Medicaid Services information related to "payments or other transfers of value" made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals, and applicable manufacturers and applicable group purchasing organizations to report annually to the Centers for Medicare and Medicaid Services ownership and investment interests held by physicians (as defined above) and their immediate family members, with disclosure of such information to be made by the Centers for Medicare and Medicaid Services on a publicly available website; and
- analogous state and foreign laws and regulations, such as state anti-kickback and false claims laws, which may apply to sales or marketing arrangements and claims involving healthcare items or services reimbursed by non-governmental third-party payors, including private insurers; state and foreign laws that require pharmaceutical companies to comply with the pharmaceutical industry's voluntary compliance guidelines and the relevant compliance guidance promulgated by the federal government or otherwise restrict payments that may be made to healthcare providers; state and foreign laws that require drug manufacturers to report information related to payments and other transfers of value to physicians and other healthcare providers or marketing expenditures; and state and foreign laws that govern the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and often are not preempted by HIPAA, thus complicating compliance efforts.

Efforts to ensure that our business arrangements with third parties will comply with applicable healthcare laws and regulations may involve substantial costs. It is possible that governmental authorities will conclude that our business practices may not comply with current or future statutes, regulations or case law interpreting applicable fraud and abuse or other healthcare laws and regulations. If our operations are found to be in violation of any of these laws or any other governmental regulations that may apply to us, we may be subject to significant civil, criminal and administrative penalties, including, without limitation, damages, fines, imprisonment, exclusion from participation in government funded healthcare programs, such as Medicare and Medicaid, and the curtailment or restructuring of our operations. If any of the physicians or other healthcare providers or entities with whom we expect to do business is found not to be in compliance with applicable laws, that person or entity may be subject to criminal, civil or administrative sanctions, including exclusions from participation in government funded healthcare programs.

Risks Related to Intellectual Property

If we are unable to obtain or protect intellectual property rights, we may not be able to compete effectively in our market.

Our success depends in significant part on our and our licensors' and licensees' ability to establish, maintain and protect patents and other intellectual property rights and operate without infringing the intellectual property rights of others. We have filed patent applications both in the United States and in foreign jurisdictions to obtain patent rights to inventions we have discovered. We have also licensed from third parties rights to patent portfolios. Some of these licenses give us the right to prepare, file and prosecute patent applications and maintain and enforce patents we have licensed, and other licenses may not give us such rights.

The patent prosecution process is expensive and time-consuming, and we and our current or future licensors and licensees may not be able to prepare, file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we or our licensors or licensees will fail to identify patentable aspects of inventions made in the course of development and commercialization activities before it is too late to obtain patent protection on them. Moreover, in some circumstances, we may not have the right to control the preparation, filing and prosecution of patent applications, or to maintain the patents, covering technology that we license from or license to third parties and are reliant on our licensors or licensees. Therefore, these patents and applications may not be prosecuted and enforced in a manner consistent with the best interests of our business. If our current or future licensors or licensees fail to establish, maintain or protect such patents and other intellectual property rights, such rights may be reduced or eliminated. If our licensors or licensees are not fully cooperative or disagree with us as to the prosecution, maintenance or enforcement of any patent rights, such patent rights could be compromised.

The patent position of biotechnology and pharmaceutical companies generally is highly uncertain, involves complex legal and factual questions and has in recent years been the subject of much litigation. As a result, the issuance, scope, validity, enforceability and commercial value of our and our current or future licensors' or licensees' patent rights are highly uncertain. Our and our licensors' or licensees' pending and future patent applications may not result in patents being issued which protect our technology or products, in whole or in part, or which effectively prevent others from commercializing competitive technologies and products. The patent examination process may require us or our licensors or licensees to narrow the scope of the claims of our or our licensors' or licensees' pending and future patent applications, which may limit the scope of patent protection that may be obtained. It is possible that third parties with products that are very similar to ours will circumvent our or our licensors' or licensees' patents by means of alternate designs or processes. There are no assurances that our patent counsel, lawyers or advisors have given us correct advice or counsel. Opinions from such patent counsel or lawyers may not be correct or based on incomplete facts. We cannot be certain that we are the first to invent the inventions covered by pending patent applications and, if we are not, we may be subject to priority disputes. We may be required to disclaim part or all of the term of certain patents or all of the term of certain patent applications. There may be prior art of which we are not aware that may affect the validity or enforceability of a patent claim. There also may be prior art of which we are aware, but which we do not believe affects the validity or enforceability of a claim, which may, nonetheless, ultimately be found to affect the validity or enforceability of a claim. No assurance can be given that if challenged, our patents would be declared by a court to be valid or enforceable or that even if found valid and enforceable, a competitor's technology or product would be found by a court to infringe our patents. We may analyze patents or patent applications of our competitors that we believe are relevant to our activities, and consider that we are free to operate in relation to our product candidate, but our

competitors may achieve issued claims, including in patents we consider to be unrelated, which block our efforts or may potentially result in our product candidate or our activities infringing such claims. The possibility exists that others will develop products which have the same effect as our products on an independent basis which do not infringe our patents or other intellectual property rights, or will design around the claims of patents that we have had issued that cover our products. Our and our licensors' or licensees' patent applications cannot be enforced against third parties practicing the technology claimed in such applications unless and until a patent issues from such applications, and then only to the extent the issued claims cover the technology.

Furthermore, given the amount of time required for the development, testing and regulatory review of new product candidates, patents protecting such candidates might expire before or shortly after such candidates are commercialized. As a result, our owned and licensed patent portfolio may not provide us with sufficient rights to exclude others from commercializing products similar or identical to ours. For example, the composition of matter patent on entinostat will expire in 2017. We expect to seek extensions of patent terms where these are available in any countries where we are prosecuting patents. This includes in the United States under the Drug Price Competition and Patent Term Restoration Act of 1984, which permits a patent term extension of up to five years beyond the expiration of the patent. However, the applicable authorities, including the FDA in the United States, and any equivalent regulatory authority in other countries, may not agree with our assessment of whether such extensions are available, and may refuse to grant extensions to our patents, or may grant more limited extensions than we request. If this occurs, our competitors may take advantage of our investment in development and trials by referencing our clinical and preclinical data and launch their product earlier than might otherwise be the case. Entinostat composition of matter U.S. Patent RE39,754, which we licensed from Bayer, expires in 2017. Even if we submit the NDA before the expiration of U.S. Patent RE39,754 and are successful in obtaining an extension of the term of U.S. Patent RE39,754 based on FDA regulatory delays, such extension will only extend the term of RE39,754 for a few additional years (up to a maximum of five additional years for patent claims covering a new chemical entity).

The portfolio we licensed from Bayer also includes U.S. Patent 7,973,166, or the '166 patent, which covers a crystalline polymorph of entinostat which is referred to as crystalline polymorph B, the crystalline polymorph used in the clinical development of entinostat. Many compounds can exist in different crystalline forms. A compound which in the solid state may exhibit multiple different crystalline forms is called polymorphic, and each crystalline form of the same chemical compound is termed a polymorph. A new crystalline form of a compound may arise, for example, due to a change in the chemical process or the introduction of an impurity. Such new crystalline forms may be patented. The '166 patent expires in 2029. By comparison, the U.S. Patent RE39,754, which expires in 2017, covers the chemical entity of entinostat and any crystalline or non-crystalline form of entinostat. On March 7, 2014, our licensor Bayer applied for reissue of the '166 patent. The reissue application seeks to add three inventors not originally listed on the '166 patent. The reissue application does not seek to amend the claims issued in the '166 patent. We do not know when, or even if, a reissue patent will be granted, or, if a reissue patent is granted, whether the claims under the reissue patent will be broader or narrower than the original patent. Even if we successfully achieve reissue of the '166 patent, any amendment to the claims in the reissue process may impact our ability to enforce the '166 patent against third parties. For example, we would no longer be able to assert the '166 patent against allegedly infringing activities occurring before the date of reissue if such activities fell outside the scope of the reissued claims. Also, for any third party activities started prior to the date of reissue and continuing after this date, we would be unable to assert the reissued patent against the continuing activities unless such activities fell within the scope of both the claims issued in the '166 patent and the reissued claims, if any.

In spite of our efforts and efforts of our licensor, we may not be successful in defending the validity of the claims of the ‘166 patent or any of its foreign counterparts. If the claims of the ‘166 patent or any of its counterparts are found to be invalid by a competent court, we may not be able to effectively block entry of generic versions of our entinostat crystalline polymorph B candidate products into markets where the crystalline polymorph B patent claims are found to be invalid.

We may not be able to protect our intellectual property rights throughout the world.

Filing, prosecuting, enforcing and defending patents on product candidates in all countries throughout the world is prohibitively expensive, and our or our licensors’ intellectual property rights in some countries outside the United States can be less extensive than those in the United States. In addition, the laws of some foreign countries do not protect intellectual property rights to the same extent as federal and state laws in the United States. Consequently, we and our licensors may not be able to prevent third parties from practicing our and our licensors’ inventions in countries outside the United States, or from selling or importing products made using our and our licensors’ inventions in and into the United States or other jurisdictions. Competitors may use our and our licensors’ technologies in jurisdictions where we have not obtained patent protection to develop their own products and may export otherwise infringing products to territories where we and our licensors have patent protection, but enforcement is not as strong as that in the United States. These products may compete with entinostat and our and our licensors’ patents or other intellectual property rights may not be effective or sufficient to prevent them from competing.

Many companies have encountered significant problems in protecting and defending intellectual property rights in foreign jurisdictions. The legal systems of certain countries, particularly certain developing countries, do not favor the enforcement of patents and other intellectual property protection, particularly those relating to biopharmaceuticals, which could make it difficult for us and our licensors to stop the infringement of our and our licensors’ patents or marketing of competing products in violation of our and our licensors’ proprietary rights generally. Proceedings to enforce our and our licensors’ patent rights in foreign jurisdictions could result in substantial costs and divert our attention from other aspects of our business, could put our and our licensors’ patents at risk of being invalidated or interpreted narrowly and our and our licensors’ patent applications at risk of not issuing and could provoke third parties to assert claims against us or our licensors. We or our licensors may not prevail in any lawsuits that we or our licensors initiate and the damages or other remedies awarded, if any, may not be commercially meaningful.

The requirements for patentability may differ in certain countries, particularly developing countries. For example, unlike other countries, China has a heightened requirement for patentability, and specifically requires a detailed description of medical uses of a claimed drug. In India, unlike the United States, there is no link between regulatory approval of a drug and its patent status. Furthermore, generic drug manufacturers or other competitors may challenge the scope, validity or enforceability of our or our licensors’ patents, requiring us or our licensors to engage in complex, lengthy and costly litigation or other proceedings. Generic drug manufacturers may develop, seek approval for, and launch generic versions of our products. In addition to India, certain countries in Europe and developing countries, including China, have compulsory licensing laws under which a patent owner may be compelled to grant licenses to third parties. In those countries, we and our licensors may have limited remedies if patents are infringed or if we or our licensors are compelled to grant a license to a third party, which could materially diminish the value of those patents. This could limit our potential revenue

opportunities. Accordingly, our and our licensors' efforts to enforce intellectual property rights around the world may be inadequate to obtain a significant commercial advantage from the intellectual property that we own or license.

If we breach our license agreement with Bayer related to entinostat or if the license agreement is otherwise terminated, we could lose the ability to continue the development and commercialization of entinostat.

Our commercial success depends upon our ability to develop, manufacture, market and sell entinostat. In March 2007, we entered into a license, development and commercialization agreement, or the Bayer license agreement, with Bayer pursuant to which we obtained a worldwide, exclusive license to develop and commercialize entinostat and any other products containing the same active ingredient. The Bayer license agreement, as amended, permits us to use entinostat or other licensed products for the treatment of any human disease, and we are obligated to use commercially reasonable efforts to develop, manufacture and commercialize licensed products for all commercially reasonable indications.

We are obligated to pay Bayer up to approximately $50 million in the aggregate upon obtaining certain milestones in the development and marketing approval of entinostat, assuming that we pursue at least two different indications for entinostat, and for certain other rights granted to us. We are also obligated to pay Bayer $100 million in aggregate sales milestones, and a tiered, single-digit royalty on net sales of entinostat or other licensed products under the Bayer license agreement. We are obligated to pay Bayer these royalties on a country-by-country basis for the life of the relevant licensed patents or 15 years after the first commercial sale of entinostat in such country, whichever is longer. We cannot determine the date on which our royalty payment obligations to Bayer would expire because no commercial sales of entinostat have occurred and the last-to-expire relevant patent covering entinostat in a given country may change in the future.

The Bayer license agreement will remain in effect until the expiration of our royalty obligations under the agreement in all countries. Either party may terminate the Bayer license agreement in its entirety or with respect to certain countries in the event of an uncured material breach by the other party. Either party may terminate the Bayer license agreement if voluntary or involuntary bankruptcy proceedings are instituted against the other party, if the other party makes an assignment for the benefit of creditors, or upon the occurrence of other specific events relating to the insolvency or dissolution of the other party. Bayer may terminate the Bayer license agreement if we seek to revoke or challenge the validity of any patent licensed to us by Bayer under the Bayer license agreement or if we procure or assist a third party to take any such action.

If the Bayer license agreement is terminated, we would not be able to develop, manufacture, market or sell entinostat and would result in our having to negotiate a new or reinstated agreement, which may not be available to us on equally favorable terms, or at all.

Changes in patent law could diminish the value of patents in general, thereby impairing our ability to protect entinostat.

As is the case with other biotechnology and pharmaceutical companies, our success is heavily dependent on intellectual property, particularly patents. Obtaining and enforcing patents in the biopharmaceutical industry involve technological and legal complexity, and obtaining and enforcing biopharmaceutical patents is costly, time-consuming, and inherently uncertain. The Supreme Court has ruled on several patent cases in recent years, either narrowing the scope of

patent protection available in certain circumstances or weakening the rights of patent owners in certain situations. In addition to increasing uncertainty with regard to our and our licensors' ability to obtain patents in the future, this combination of events has created uncertainty with respect to the value of patents, once obtained. Depending on decisions by Congress, the federal courts, and the U.S. Patent and Trademark Office, or USPTO, the laws and regulations governing patents could change in unpredictable ways that may weaken our and our licensors' ability to obtain new patents or to enforce existing patents and patents we and our licensors or collaborators may obtain in the future. In view of recent developments in U.S. patent laws, in spite of our efforts and the efforts of our licensors, we may face difficulties in obtaining allowance of our biomarker based patient selection patent claims or if we are successful in obtaining allowance of our biomarker based patient selection claims, we or our licensor may be unsuccessful in defending the validity of such claims if challenged before a competent court.

Recent patent reform legislation could increase the uncertainties and costs surrounding the prosecution of our and our licensors' patent applications and the enforcement or defense of our or our licensors' issued patents. On September 16, 2011, the Leahy-Smith America Invents Act, or the Leahy-Smith Act, was signed into law. The Leahy-Smith Act includes a number of significant changes to U.S. patent law. These include provisions that affect the way patent applications are prosecuted and may also affect patent litigation. The USPTO recently developed new regulations and procedures to govern administration of the Leahy-Smith Act, and many of the substantive changes to patent law associated with the Leahy-Smith Act, and in particular, the first to file provisions, only became effective on March 16, 2013. Accordingly, it is not clear what, if any, impact the Leahy-Smith Act will have on the operation of our business. However, the Leahy-Smith Act and its implementation could increase the uncertainties and costs surrounding the prosecution of our or our licensors' patent applications and the enforcement or defense of our or our licensors' issued patents, all of which could have a material adverse effect on our business and financial condition.

Obtaining and maintaining our patent protection depends on compliance with various procedural, document submission, fee payment and other requirements imposed by governmental patent agencies, and our patent protection could be reduced or eliminated for non-compliance with these requirements.

Periodic maintenance and annuity fees on any issued patent are due to be paid to the USPTO and foreign patent agencies in several stages over the lifetime of the patent. The USPTO and various foreign governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. While an inadvertent lapse can in many cases be cured by payment of a late fee or by other means in accordance with the applicable rules, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. Non-compliance events that could result in abandonment or lapse of a patent or patent application include failure to respond to official actions within prescribed time limits, non-payment of fees and failure to properly legalize and submit formal documents. If we or our licensors fail to maintain the patents and patent applications covering entinostat, our competitors might be able to enter the market, which would have a material adverse effect on our business.

We may become involved in lawsuits to protect or enforce our intellectual property, which could be expensive, time-consuming and unsuccessful and have a material adverse effect on the success of our business and on our stock price.

Third parties may infringe our or our licensors' patents or misappropriate or otherwise violate our or our licensors' intellectual property rights. In the future, we or our licensors may

initiate legal proceedings to enforce or defend our or our licensors' intellectual property rights, to protect our or our licensors' trade secrets or to determine the validity or scope of intellectual property rights we own or control. Also, third parties may initiate legal proceedings against us or our licensors to challenge the validity or scope of intellectual property rights we own or control. The proceedings can be expensive and time-consuming and many of our or our licensors' adversaries in these proceedings may have the ability to dedicate substantially greater resources to prosecuting these legal actions than we or our licensors can. Accordingly, despite our or our licensors' efforts, we or our licensors may not be able to prevent third parties from infringing upon or misappropriating intellectual property rights we own or control, particularly in countries where the laws may not protect our rights as fully as in the United States. Litigation could result in substantial costs and diversion of management resources, which could harm our business and financial results. In addition, in an infringement proceeding, a court may decide that a patent owned by or licensed to us is invalid or unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our or our licensors' patents do not cover the technology in question. An adverse result in any litigation proceeding could put one or more of our or our licensors' patents at risk of being invalidated, held unenforceable or interpreted narrowly.

Third-party preissuance submission of prior art to the USPTO, or opposition, derivation, reexamination, *inter partes* review or interference proceedings, or other preissuance or post-grant proceedings in the United States or other jurisdictions provoked by third parties or brought by us or our licensors or collaborators may be necessary to determine the priority of inventions with respect to our or our licensors' patents or patent applications. An unfavorable outcome could require us or our licensors to cease using the related technology and commercializing entinostat, or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us or our licensors a license on commercially reasonable terms or at all. Even if we or our licensors obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us or our licensors. In addition, if the breadth or strength of protection provided by our or our licensors' patents and patent applications is threatened, it could dissuade companies from collaborating with us to license, develop or commercialize current or future product candidates. Even if we successfully defend such litigation or proceeding, we may incur substantial costs and it may distract our management and other employees. We could be found liable for monetary damages, including treble damages and attorneys' fees, if we are found to have willfully infringed a patent.

Furthermore, because of the substantial amount of discovery required in connection with intellectual property litigation, there is a risk that some of our confidential information could be compromised by disclosure during this process. There could also be public announcements of the results of hearings, motions or other interim proceedings or developments. If securities analysts or investors perceive these results to be negative, it could have a downward effect on the price of shares of our common stock.

Third parties may initiate legal proceedings against us alleging that we infringe their intellectual property rights or we may initiate legal proceedings against third parties to challenge the validity or scope of intellectual property rights controlled by third parties, the outcome of which would be uncertain and could have a material adverse effect on the success of our business.

Third parties may initiate legal proceedings against us or our licensors or collaborators alleging that we or our licensors or collaborators infringe their intellectual property rights or we or our licensors or collaborators may initiate legal proceedings against third parties to challenge

the validity or scope of intellectual property rights controlled by third parties, including in oppositions, interferences, reexaminations, *inter partes* reviews or derivation proceedings before the United States or other jurisdictions. These proceedings can be expensive and time-consuming and many of our or our licensors' adversaries in these proceedings may have the ability to dedicate substantially greater resources to prosecuting these legal actions than we or our licensors or collaborators can.

An unfavorable outcome could require us or our licensors or collaborators to cease using the related technology or developing or commercializing entinostat, or to attempt to license rights to it from the prevailing party. Our business could be harmed if the prevailing party does not offer us or our licensors or collaborators a license on commercially reasonable terms or at all. Even if we or our licensors or collaborators obtain a license, it may be non-exclusive, thereby giving our competitors access to the same technologies licensed to us or our licensors or collaborators. In addition, we could be found liable for monetary damages, including treble damages and attorneys' fees, if we are found to have willfully infringed a patent. A finding of infringement could prevent us from commercializing entinostat or force us to cease some of our business operations, which could materially harm our business.

We may be subject to claims by third parties asserting that we or our employees have misappropriated their intellectual property, or claiming ownership of what we regard as our own intellectual property.

Many of our employees, including our senior management, were previously employed at universities or at other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Some of these employees executed proprietary rights, non-disclosure and non-competition agreements in connection with such previous employment. Although we try to ensure that our employees do not use the proprietary information or know-how of others in their work for us, we may be subject to claims that we or these employees have used or disclosed confidential information or intellectual property, including trade secrets or other proprietary information, of any such employee's former employer. Litigation may be necessary to defend against these claims.

If we fail in prosecuting or defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel or sustain damages. Such intellectual property rights could be awarded to a third party, and we could be required to obtain a license from such third party to commercialize our technology or products. Such a license may not be available on commercially reasonable terms or at all. Even if we successfully prosecute or defend against such claims, litigation could result in substantial costs and distract management.

Our inability to protect our confidential information and trade secrets would harm our business and competitive position.

In addition to seeking patents for some of our technology and products, we also rely on trade secrets, including unpatented know-how, technology and other proprietary information, to maintain our competitive position. We seek to protect these trade secrets, in part, by entering into non-disclosure and confidentiality agreements with parties who have access to them, such as our employees, corporate collaborators, outside scientific collaborators, contract manufacturers, consultants, advisors and other third parties. We also enter into confidentiality and invention or patent assignment agreements with our employees and consultants. Despite these efforts, any of these parties may breach the agreements and disclose our proprietary information, including our trade secrets, and we may not be able to obtain adequate remedies

for such breaches. Enforcing a claim that a party illegally disclosed or misappropriated a trade secret is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, some courts both within and outside the United States may be less willing or unwilling to protect trade secrets. If a competitor lawfully obtained or independently developed any of our trade secrets, we would have no right to prevent such competitor from using that technology or information to compete with us, which could harm our competitive position.

Risks Related to this Offering and Ownership of Our Common Stock

We have broad discretion in the use of the net proceeds from this offering and may not use them effectively.

Our management will have broad discretion in the application of the net proceeds from this offering, and you will be relying on the judgment of our management regarding the application of these proceeds. You will not have the opportunity, as part of your investment decision, to assess whether we are using the proceeds appropriately. Our management might not apply our net proceeds in ways that ultimately increase the value of your investment. If we do not invest or apply the net proceeds from this offering in ways that enhance stockholder value, we may fail to achieve expected financial results, which could cause our stock price to decline.

We do not know whether an active, liquid and orderly trading market will develop for our common stock or what the market price of our common stock will be and as a result it may be difficult for you to sell your shares of our common stock.

Prior to this offering, no market for shares of our common stock existed and an active trading market for our shares may never develop or be sustained following this offering. We will determine the initial public offering price based on a number of factors, and such price may not be ultimately indicative of the market price of our common stock after this offering. The market value of our common stock may decrease from the initial public offering price. As a result of these and other factors, you may be unable to resell your shares of our common stock at or above the initial public offering price. The lack of an active market may impair your ability to sell your shares at the time you wish to sell them or at a price that you consider reasonable. The lack of an active market may also reduce the fair market value of your shares. Furthermore, an inactive market may also impair our ability to raise capital by selling shares of our common stock and may impair our ability to enter into strategic collaborations or acquire companies or products by using our shares of common stock as consideration.

The market price of our stock may be volatile and you could lose all or part of your investment.

The trading price of our common stock following this offering is likely to be highly volatile and subject to wide fluctuations in response to various factors, some of which we cannot control. In addition to the factors discussed in this “Risk Factors” section and elsewhere in this prospectus, these factors include:

- the success of competitive products or technologies;
- regulatory actions with respect to our products or our competitors’ products;
- actual or anticipated changes in our growth rate relative to our competitors;
- announcements by us or our competitors of significant acquisitions, strategic collaborations, joint ventures, collaborations or capital commitments;
- results of trials of entinostat or those of our competitors;
- regulatory or legal developments in the United States and other countries;

- developments or disputes concerning patent applications, issued patents or other proprietary rights;
- the recruitment or departure of key personnel;
- the level of expenses related to entinostat or clinical development programs;
- actual or anticipated changes in estimates as to financial results, development timelines or recommendations by securities analysts;
- variations in our financial results or those of companies that are perceived to be similar to us;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- share price and volume fluctuations attributable to inconsistent trading volume levels of our shares;
- announcement or expectation of additional financing efforts;
- sales of our common stock by us, our insiders or our other stockholders;
- changes in the structure of healthcare payment systems;
- market conditions in the pharmaceutical and biotechnology sectors; and
- general economic, industry and market conditions.

In addition, the stock market in general, and the NASDAQ Global Market and biopharmaceutical companies in particular, frequently experiences extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of such companies. Broad market and industry factors may negatively affect the market price of our common stock, regardless of our actual operating performance. The realization of any of the above risks or any of a broad range of other risks, including those described in this “Risk Factors” section, could have a dramatic and material adverse impact on the market price of our common stock.

We may sell additional equity or debt securities or enter into other arrangements to fund our operations, which may result in dilution to our stockholders and impose restrictions or limitations on our business.

Until we can generate a sufficient amount of revenue from our products, if ever, we expect to finance future cash needs through public or private equity or debt offerings. We may also seek additional funding through government or other third-party funding and other collaborations, strategic alliances and licensing arrangements. These financing activities may have an adverse impact on our stockholders’ rights as well as on our operations, and such additional funding may not be available on reasonable terms, if at all. If we raise additional funds through the issuance of additional debt or equity securities, it may result in dilution to our existing stockholders and/or increased fixed payment obligations. Furthermore, these securities may have rights senior to those of our common stock and could contain covenants that would restrict our operations and potentially impair our competitiveness, such as limitations on our ability to incur additional debt, limitations on our ability to acquire, sell or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business. Additionally, if we seek funds through arrangements with collaborative partners, these arrangements may require us to relinquish rights to some of our technologies or product candidates or otherwise agree to terms unfavorable to us. Any of these events could significantly harm our business, financial condition and prospects.

If securities or industry analysts do not publish research or reports about our business, or if they issue an adverse or misleading opinion regarding our stock, our stock price and trading volume could decline.

The trading market for our common stock will be influenced by the research and reports that industry or securities analysts publish about us or our business. We do not currently have and may never obtain research coverage by securities and industry analysts. If no or few securities or industry analysts commence coverage of us, the trading price for our stock could be negatively impacted. In the event we obtain securities or industry analyst coverage, if any of the analysts who cover us issue an adverse or misleading opinion regarding us, our business model, our intellectual property or our stock performance, or if our trials or operating results fail to meet the expectations of analysts, our stock price would likely decline. If one or more of these analysts cease coverage of us or fail to publish reports on us regularly, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline.

Our principal stockholders and management own a significant percentage of our stock and will be able to exert significant control over matters subject to stockholder approval.

Prior to this offering, our executive officers, directors, holders of 5% or more of our capital stock and their respective affiliates beneficially owned approximately 91.5% of our outstanding voting stock and, upon completion of this offering, that same group will hold approximately 61.1% of our outstanding voting stock, assuming no exercise of outstanding options. After this offering, this group of stockholders will have the ability to control us through this ownership position even if they do not purchase any additional shares in this offering. These stockholders may be able to determine all matters requiring stockholder approval. For example, these stockholders may be able to control elections of directors, amendments of our organizational documents, or approval of any merger, sale of assets or other major corporate transaction. This may prevent or discourage unsolicited acquisition proposals or offers for our common stock that you may feel are in your best interest as one of our stockholders. The interests of this group of stockholders may not always coincide with your interests or the interests of other stockholders and they may act in a manner that advances their best interests and not necessarily those of other stockholders, including seeking a premium value for their common stock, and might affect the prevailing market price for our common stock.

We are an “emerging growth company” as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, and will be able to avail ourselves of reduced disclosure requirements applicable to emerging growth companies, which could make our common stock less attractive to investors and adversely affect the market price of our common stock.

For so long as we remain an “emerging growth company” as defined in the JOBS Act, we may take advantage of certain exemptions from various requirements applicable to public companies that are not “emerging growth companies” including:

- the provisions of Section 404(b) of the Sarbanes-Oxley Act of 2002, or the Sarbanes-Oxley Act, requiring that our independent registered public accounting firm provide an attestation report on the effectiveness of our internal control over financial reporting;
- the “say on pay” provisions (requiring a non-binding stockholder vote to approve compensation of certain executive officers) and the “say on golden parachute” provisions (requiring a non-binding stockholder vote to approve golden parachute arrangements for certain executive officers in connection with mergers and certain other business combinations) of the Dodd-Frank Act and some of the disclosure requirements of the Dodd-Frank Act relating to compensation of our chief executive officer;

- the requirement to provide detailed compensation discussion and analysis in proxy statements and reports filed under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and instead provide a reduced level of disclosure concerning executive compensation; and
- any rules that the Public Company Accounting Oversight Board may adopt requiring mandatory audit firm rotation or a supplement to the auditor's report on the financial statements.

We may take advantage of these exemptions until we are no longer an "emerging growth company." We would cease to be an "emerging growth company" upon the earliest of: (i) the first fiscal year following the fifth anniversary of this offering; (ii) the first fiscal year after our annual gross revenues are $1 billion or more; (iii) the date on which we have, during the previous three-year period, issued more than $1 billion in non-convertible debt securities; or (iv) as of the end of any fiscal year in which the market value of our common stock held by non-affiliates exceeded $700 million as of the end of the second quarter of that fiscal year.

We currently intend to take advantage of some, but not all, of the reduced regulatory and reporting requirements that will be available to us so long as we qualify as an "emerging growth company." For example, we have irrevocably elected not to take advantage of the extension of time to comply with new or revised financial accounting standards available under Section 102(b) of the JOBS Act. Our independent registered public accounting firm will not be required to provide an attestation report on the effectiveness of our internal control over financial reporting so long as we qualify as an "emerging growth company," which may increase the risk that material weaknesses or significant deficiencies in our internal control over financial reporting go undetected. Likewise, so long as we qualify as an "emerging growth company," we may elect not to provide you with certain information, including certain financial information and certain information regarding compensation of our executive officers, that we would otherwise have been required to provide in filings we make with the Securities and Exchange Commission, or SEC, which may make it more difficult for investors and securities analysts to evaluate our company. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock, and our stock price may be more volatile and may decline.

We will incur increased costs as a result of operating as a public company, and our management will devote substantial time to new compliance initiatives.

As a public company, we will incur significant legal, accounting and other expenses that we did not incur as a private company, and these expenses may increase even more after we are no longer an "emerging growth company." We will be subject to the reporting requirements of the Exchange Act, the Sarbanes-Oxley Act, the Dodd-Frank Wall Street Reform and Protection Act, as well as rules adopted, and to be adopted, by the SEC and the NASDAQ Global Market. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. Moreover, we expect these rules and regulations to substantially increase our legal and financial compliance costs and to make some activities more time-consuming and costly. The increased costs will increase our net loss. For example, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance and we may be required to incur substantial costs to maintain the sufficient coverage. We cannot predict or estimate the amount or timing of additional costs we may incur to respond to these requirements. The impact of these requirements could also make it more difficult for us to attract and retain qualified persons to serve on our board of directors, our board committees or as executive officers.

Sales of a substantial number of shares of our common stock in the public market could cause our stock price to fall.

Sales of a substantial number of shares of our common stock in the public market could occur at any time. These sales, or the perception in the market that the holders of a large number of shares intend to sell shares, could reduce the market price of our common stock. After this offering, we will have outstanding 12,180,745 shares of common stock based on the number of shares outstanding as of June 30, 2014, assuming: (i) no exercise of the underwriters' over-allotment option; and (ii) the conversion of all outstanding shares of our convertible preferred stock into 7,807,593 shares of common stock immediately prior to the completion of this offering. This includes the shares that we sell in this offering, which may be resold in the public market immediately without restriction, unless purchased by our affiliates. Of the remaining shares, 7,880,745 shares of our common stock are currently restricted as a result of securities laws or lock-up agreements but will be able to be sold after this offering as described in the "Shares Eligible for Future Sale" section of this prospectus. Moreover, after this offering, holders of an aggregate of 8,087,675 shares of our common stock will have rights, subject to certain conditions, to require us to file registration statements covering their shares or to include their shares in registration statements that we may file for ourselves or other stockholders. We also intend to register all shares of common stock that we may issue under our equity compensation plans. Once we register these shares, they can be freely sold in the public market upon issuance, subject to volume limitations applicable to affiliates and the lock-up agreements described in the "Underwriting" section of this prospectus.

We may be subject to securities litigation, which is expensive and could divert management attention.

The market price of our common stock may be volatile, and in the past, companies that have experienced volatility in the market price of their stock have been subject to securities class action litigation. We may be the target of this type of litigation in the future. Securities litigation against us could result in substantial costs and divert our management's attention from other business concerns, which could seriously harm our business.

If we fail to maintain an effective system of internal control over financial reporting in the future, we may not be able to accurately report our financial condition, results of operations or cash flows, which may adversely affect investor confidence in us and, as a result, the value of our common stock.

The Sarbanes-Oxley Act requires, among other things, that we maintain effective internal controls for financial reporting and disclosure controls and procedures. Commencing with our annual report on Form 10-K for the year ending December 31, 2014, we will be required, under Section 404 of the Sarbanes-Oxley Act, to furnish a report by management on, among other things, the effectiveness of our internal control over financial reporting. This assessment will need to include disclosure of any material weaknesses identified by our management in our internal control over financial reporting. A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting that results in more than a reasonable possibility that a material misstatement of annual or interim financial statements will not be prevented or detected on a timely basis. Section 404 of the Sarbanes-Oxley Act also generally requires an attestation from our independent registered public accounting firm on the effectiveness of our internal control over financial reporting. However, for as long as we remain an emerging growth company as defined in the JOBS Act, we intend to take advantage of the exemption permitting us not to comply with the independent registered public accounting firm attestation requirement.

Our compliance with Section 404 will require that we incur substantial expense and expend significant management efforts. We currently do not have an internal audit group, and we will need to hire additional accounting and financial staff with appropriate public company experience and technical accounting knowledge, and compile the system and process documentation necessary to perform the evaluation needed to comply with Section 404. We may not be able to complete our evaluation, testing and any required remediation in a timely fashion. During the evaluation and testing process, if we identify one or more material weaknesses in our internal control over financial reporting, we will be unable to assert that our internal control over financial reporting is effective. We cannot assure you that there will not be material weaknesses or significant deficiencies in our internal control over financial reporting in the future. Any failure to maintain internal control over financial reporting could severely inhibit our ability to accurately report our financial condition, results of operations or cash flows. If we are unable to conclude that our internal control over financial reporting is effective, or if our independent registered public accounting firm determines we have a material weakness or significant deficiency in our internal control over financial reporting once that firm begin its Section 404 reviews, we could lose investor confidence in the accuracy and completeness of our financial reports, the market price of our common stock could decline, and we could be subject to sanctions or investigations by the NASDAQ Global Market, the SEC or other regulatory authorities. Failure to remedy any material weakness in our internal control over financial reporting, or to implement or maintain other effective control systems required of public companies, could also restrict our future access to the capital markets.

If we are unable to successfully remediate the existing material weakness in our internal control over financial reporting, the accuracy and timing of our financial reporting may be adversely affected.

In preparing our consolidated financial statements as of and for the year ended December 31, 2013, we and our independent registered public accounting firm identified a control deficiency in the design and operation of our internal control over financial reporting that constituted a material weakness in our internal control over financial reporting. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our financial statements will not be prevented or detected on a timely basis. The material weakness identified resulted from the fact that we do not have sufficient financial reporting and accounting staff with appropriate training in generally accepted accounting principles in the United States, or GAAP, and SEC rules and regulations. As such, our controls over financial reporting were not designed or operating effectively, and as a result there were adjustments required in connection with closing our books and records and preparing our December 31, 2013 consolidated financial statements.

The material weakness in our internal control over financial reporting was attributable to our lack of sufficient financial reporting and accounting personnel with the technical expertise to appropriately account for complex, non-routine transactions. In response to this material weakness, we plan to hire additional personnel with public company financial reporting expertise to build our financial management and reporting infrastructure, and further develop and document our accounting policies and financial reporting procedures. However, we cannot assure you that we will be successful in pursuing these measures or that these measures will significantly improve or remediate the material weakness described above. We also cannot assure you that we have identified all of our existing material weaknesses, or that we will not in the future have additional material weaknesses. We have not yet remediated our material weakness, and the remediation measures that we intend to implement may be insufficient to address our existing material weakness or to identify or prevent additional material weaknesses.

Neither we nor our independent registered public accounting firm has performed an evaluation of our internal control over financial reporting during any period in accordance with the provisions of the Sarbanes-Oxley Act. In light of the control deficiencies and the resulting material weakness that were identified as a result of the limited procedures performed, we believe that it is possible that, had we and our independent registered public accounting firm performed an evaluation of our internal control over financial reporting in accordance with the provisions of the Sarbanes-Oxley Act, additional material weaknesses and significant control deficiencies may have been identified. However, for as long as we remain an "emerging growth company" as defined in the JOBS Act, we intend to take advantage of the exemption permitting us not to comply with the requirement that our independent registered public accounting firm provide an attestation on the effectiveness of our internal control over financial reporting.

If we fail to remediate the material weakness or to meet the demands that will be placed upon us as a public company, including the requirements of the Sarbanes-Oxley Act, we may be unable to accurately report our financial results, or report them within the timeframes required by law or stock exchange regulations. Failure to comply with Section 404 of the Sarbanes-Oxley Act could also potentially subject us to sanctions or investigations by the SEC or other regulatory authorities. There is no assurance that we will be able to remediate the material weakness in a timely manner, or at all, or that in the future, additional material weaknesses will not exist or otherwise be discovered. If our efforts to remediate the material weakness identified are not successful, or if other material weaknesses or other deficiencies occur, our ability to accurately and timely report our financial position could be impaired, which could result in late filings of our annual and quarterly reports under the Exchange Act, restatements of our consolidated financial statements, a decline in our stock price, suspension or delisting of our common stock from the NASDAQ Global Market, and could adversely affect our reputation, results of operations and financial condition.

Our disclosure controls and procedures may not prevent or detect all errors or acts of fraud.

Upon completion of this offering, we will become subject to the periodic reporting requirements of the Exchange Act. We designed our disclosure controls and procedures to reasonably assure that information we must disclose in reports we file or submit under the Exchange Act is accumulated and communicated to management, and recorded, processed, summarized and reported within the time periods specified in the rules and forms of the SEC. We believe that any disclosure controls and procedures or internal controls and procedures, no matter how well-conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met.

These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people or by an unauthorized override of the controls. Accordingly, because of the inherent limitations in our control system, misstatements due to error or fraud may occur and not be detected.

Some provisions of our charter documents and Delaware law may have anti-takeover effects that could discourage an acquisition of us by others, even if an acquisition would benefit our stockholders and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our amended and restated certificate of incorporation and amended and restated bylaws that will become effective immediately prior to the completion of this offering, as well as provisions of Delaware law, could make it more difficult for a third party to acquire us or increase the cost of acquiring us, even if doing so would benefit our stockholders, or remove our current management. These provisions include:

- authorizing the issuance of "blank check" preferred stock, the terms of which we may establish and shares of which we may issue without stockholder approval;
- prohibiting cumulative voting in the election of directors, which would otherwise allow for less than a majority of stockholders to elect director candidates;
- prohibiting stockholder action by written consent, thereby requiring all stockholder actions to be taken at a meeting of our stockholders;
- eliminating the ability of stockholders to call a special meeting of stockholders; and
- establishing advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted upon at stockholder meetings.

These provisions may frustrate or prevent any attempts by our stockholders to replace or remove our current management by making it more difficult for stockholders to replace members of our board of directors, who are responsible for appointing the members of our management. Because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, or the DGCL, which may discourage, delay or prevent someone from acquiring us or merging with us whether or not it is desired by or beneficial to our stockholders. Under the DGCL, a corporation may not, in general, engage in a business combination with any holder of 15% or more of its capital stock unless the holder has held the stock for three years or, among other things, the board of directors has approved the transaction. Any provision of our amended and restated certificate of incorporation or amended and restated bylaws or Delaware law that has the effect of delaying or deterring a change of control could limit the opportunity for our stockholders to receive a premium for their shares of our common stock, and could also affect the price that some investors are willing to pay for our common stock.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS AND INDUSTRY DATA

Some of the statements made under “Prospectus Summary,” “Risk Factors,” “Use of Proceeds,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” “Business” and elsewhere in this prospectus constitute forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as “may,” “will,” “should,” “expects,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential,” “intends” or “continue,” or the negative of these terms or other comparable terminology.

Forward-looking statements include, but are not limited to, statements about:

- our estimates regarding our expenses, future revenues, anticipated capital requirements and our needs for additional financing, including any potential borrowing from the term loan facility with Solar;
- the timing of the commencement, progress and receipt of data from the planned Phase 3 clinical trial of entinostat in HR-positive advanced breast cancer;
- the timing of the commencement, progress and receipt of data from the planned Phase 2 clinical trials of entinostat in breast and lung cancers;
- the timing of the commencement, progress and receipt of data from any other clinical trials that we and our collaborators may conduct;
- our ability to replicate results from a completed clinical trial in a future clinical trial;
- our expectations regarding the potential safety, efficacy or clinical utility of entinostat;
- our ability to obtain and maintain regulatory approval for entinostat and the timing or likelihood of regulatory filings and approvals for entinostat;
- our ability to maintain our license with Bayer and the University of Colorado;
- the implementation of our strategic plans for our business and entinostat development;
- the scope of protection we establish and maintain for intellectual property rights covering entinostat and our technology;
- the market adoption of entinostat by physicians and patients; and
- developments relating to our competitors and our industry.

These statements are only current predictions and are subject to known and unknown risks, uncertainties and other factors that may cause our or our industry’s actual results, levels of activity, performance or achievements to be materially different from those anticipated by the forward-looking statements. We discuss many of these risks in this prospectus in greater detail under the heading “Risk Factors” and elsewhere in this prospectus. You should not rely upon forward-looking statements as predictions of future events.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. Except as required by law, after the date of this prospectus, we are under no duty to update or revise any of the forward-looking statements, whether as a result of new information, future events or otherwise.

This prospectus also contains estimates, projections and other information concerning our industry, the market and our business. Information that is based on estimates, forecasts, projections or similar methodologies is inherently subject to uncertainties and actual events or circumstances may differ materially from events and circumstances reflected in this information. We obtained the industry, market and competitive position data in this prospectus from our own internal estimates and research as well as from industry and general publications and research surveys and studies conducted by third parties.

USE OF PROCEEDS

We estimate that our net proceeds from the sale of shares of our common stock in this offering will be approximately $51.8 million, based on an assumed initial public offering price of $14.00 per share, the midpoint of the estimated price range set forth on the cover of this prospectus, after deducting underwriting discounts and commissions and estimated offering expenses payable by us. If the underwriters exercise their over-allotment option in full, we estimate that our net proceeds will be approximately $60.2 million based on an assumed initial public offering price of $14.00 per share, the midpoint of the estimated price range set forth on the cover of this prospectus, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

The principal purposes of this offering are to obtain additional capital to support our operations, establish a public market for our common stock and to facilitate our future access to the public capital markets. We currently expect to use the net proceeds from this offering for the following purposes:

- approximately $10.3 million to support the Phase 3 clinical trial of entinostat in HR-positive locally advanced or metastatic breast cancer to the primary endpoint of PFS data;
- approximately $9.4 million to fund the Phase 1b clinical trial of entinostat in combination with antibodies targeting PD1 to characterize the safety, define a recommended Phase 2 dose and assess the preliminary clinical activity of this combination;
- approximately $10.9 million to conduct activities to support the filing of an NDA, including manufacturing of registration batches of active pharmaceutical ingredient and final drug product; and
- the remainder for working capital and general corporate purposes.

The expected use of the net proceeds from this offering represents our intentions based upon our current plans and business conditions, which could change in the future as our plans and business conditions evolve. The amounts and timing of our actual expenditures depend on numerous factors, including the ongoing status of and results from our clinical trials and other studies and any unforeseen cash needs. As a result, our management will have broad discretion in applying the net proceeds from this offering. Although we may use a portion of the net proceeds from this offering for the acquisition or licensing, as the case may be, of product candidates, technologies, compounds, other assets or complementary businesses, we have no current understandings, agreements or commitments to do so. Pending these uses, we intend to invest the net proceeds from this offering in interest-bearing, investment-grade securities.

Although it is difficult to predict future liquidity requirements, we believe that the net proceeds from this offering, together with our existing cash, cash equivalents and short-term investments, and the amounts available for borrowing under the term loan facility with Solar Capital Ltd., will fund our projected operating expenses and capital expenditure requirements through mid-2017.

Each $1.00 increase (decrease) in the assumed initial public offering price of $14.00 per share, the midpoint of the estimated price range set forth on the cover of this prospectus, would increase (decrease) the net proceeds to us from this offering by approximately $4.0 million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we

are offering. An increase of 1.0 million shares in the number of shares offered by us, together with a concurrent $1.00 increase in the assumed initial public offering price of $14.00 per share, the midpoint of the estimated price range set forth on the cover of this prospectus, would increase the net proceeds to us from this offering by approximately $17.9 million after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Conversely, a decrease of 1.0 million shares in the number of shares offered by us, together with a concurrent $1.00 decrease in the assumed initial public offering price of $14.00 per share, the midpoint of the estimated price range set forth on the cover of this prospectus, would decrease the net proceeds to us from this offering by approximately $16.1 million after deducting underwriting discounts and commissions and estimated offering expenses payable by us. The as adjusted information discussed above is illustrative only and will adjust based on the actual initial public offering price and other terms of this offering determined at pricing.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain all available funds and any future earnings to support our operations and finance the growth and development of our business and do not intend to declare or pay any cash dividends in the foreseeable future. As a result, you will likely need to sell your shares of common stock to realize a return on your investment, and you may not be able to sell your shares at or above the price you paid for them. Payment of cash dividends, if any, in the future will be at the discretion of our board of directors and will depend on then-existing conditions, including our financial condition, operating results, contractual restrictions, capital requirements, business prospects and other factors our board of directors may deem relevant.

CAPITALIZATION

The following table sets forth our cash, cash equivalents and short-term investments and our capitalization as of June 30, 2014, on:

- an actual basis;
- a pro forma basis giving effect to the conversion of all outstanding shares of our convertible preferred stock outstanding as of June 30, 2014 into an aggregate of 7,807,593 shares of our common stock upon completion of this offering; and
- a pro forma as adjusted basis giving additional effect to the sale of 4,300,000 shares of common stock in this offering at an assumed initial public offering price of $14.00 per share, the midpoint of the estimated price range set forth on the cover of this prospectus, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, as if the sale of the shares in this offering had occurred on June 30, 2014.

The information in this table is illustrative only and our capitalization following the completion of this offering will be adjusted based on the actual initial public offering price and other terms of this offering determined at pricing. You should read this table in conjunction with the information contained in “Use of Proceeds,” “Selected Consolidated Financial Data” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” as well as the financial statements and the notes thereto included elsewhere in this prospectus.

(in thousands, except share and per share amounts)	June 30, 2014		
	Actual	Pro Forma	Pro Forma as Adjusted
		(unaudited)	
Cash, cash equivalents and short-term investments	$ 4,680	$ 4,680	$ 59,745
Convertible preferred stock, par value $0.001: 12,325,202 shares authorized, 7,632,486 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	143,562	—	—
Stockholders’ (deficit) equity:			
Series A convertible preferred stock, par value $0.001: 4,390,243 shares authorized, 875,545 shares issued and outstanding, actual; no shares authorized, issued or outstanding, pro forma and pro forma as adjusted	7,231	—	—
Common stock, par value $0.0001: 9,837,398 shares authorized, 73,152 shares issued and outstanding, actual; 100,000,000 shares authorized, 7,880,745 shares issued and outstanding, pro forma; 100,000,000 shares authorized, 12,180,745 shares issued and outstanding, pro forma as adjusted	1	1	1
Preferred stock, par value $0.001: No shares authorized, issued and outstanding, actual; 10,000,000 shares authorized, no shares issued and outstanding, pro forma and pro forma as adjusted	—	—	—
Additional paid-in capital	—	150,793	202,579
Deficit accumulated during the development stage	(146,484)	(146,484)	(146,484)
Total stockholders’ (deficit) equity	(139,252)	4,310	56,096
Total capitalization	$ 4,310	$ 4,310	$ 56,096

The number of shares of our common stock outstanding immediately following this offering set forth above is based on 7,880,745 shares of our common stock outstanding as of June 30, 2014, which gives effect to the conversion of all outstanding shares of our convertible preferred stock into an aggregate of 7,807,593 shares of our common stock upon completion of this offering.

The number of shares of our common stock outstanding immediately following this offering set forth above excludes:

- 923,874 shares of our common stock issuable upon the exercise of stock options outstanding as of June 30, 2014 under the 2007 Plan at a weighted-average exercise price of $7.83 per share;
- 233,415 shares of our common stock issuable upon the exercise of the Bayer Warrant at an exercise price of $1.23 per share, based upon 13,104,619 shares of our common stock outstanding as of June 30, 2014 on a fully diluted basis immediately following this offering, which warrant is expected to remain outstanding upon completion of this offering;
- 2,000,000 shares of our common stock (which includes 72,280 shares reserved for issuance under the 2007 Plan as of June 30, 2014) reserved for issuance under the 2013 Plan, which will become effective upon completion of this offering, as well as any future increases in the number of shares of our common stock reserved for issuance under the 2013 Plan; and
- 131,000 shares of our common stock reserved for issuance under the ESPP, which will become effective upon completion of this offering, as well as any future increases in the number of shares of our common stock reserved for issuance under the ESPP.

Each $1.00 increase (decrease) in the assumed initial public offering price of $14.00 per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase (decrease) each of cash, cash equivalents and short-term investments, additional paid-in capital, total stockholders' (deficit) equity and total capitalization by approximately $4.0 million, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. We may also increase or decrease the number of shares we are offering. Each increase (decrease) of 1.0 million shares in the number of shares offered by us would increase (decrease) each of cash, cash equivalents and short-term investments, additional paid-in capital, total stockholders' (deficit) equity and total capitalization by approximately $13.0 million, assuming that the assumed initial public offering price of $14.00 per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, remains the same, and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. The pro forma as adjusted information discussed above is illustrative only and will adjust based on the actual initial public offering price and other terms of this offering determined at pricing.

DILUTION

If you invest in our common stock in this offering, your ownership interest will be immediately diluted to the extent of the difference between the assumed initial public offering price per share of our common stock and the pro forma as adjusted net tangible book value per share of our common stock immediately after this offering. Net tangible book value per share of our common stock is determined at any date by subtracting our total liabilities and convertible preferred stock from the amount of our total tangible assets (total assets less intangible assets) and dividing the difference by the number of shares of our common stock deemed to be outstanding at that date.

Our historical net tangible book deficit as of June 30, 2014, was approximately $(139.3) million, or $(1,903.60) per share, based on 73,152 shares of common stock outstanding as of June 30, 2014. The pro forma net tangible book value as of June 30, 2014, is approximately $4.3 million, or approximately $0.55 per share. The pro forma net tangible book value per share gives effect to the conversion of all outstanding shares of our convertible preferred stock outstanding as of June 30, 2014 into an aggregate of 7,807,593 shares of our common stock upon completion of this offering.

Investors participating in this offering will incur immediate and substantial dilution. After giving effect to our receipt of approximately $51.8 million of estimated net proceeds, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, from our sale of common stock in this offering at an assumed initial public offering price of $14.00 per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, our pro forma as adjusted net tangible book value (deficit) as of June 30, 2014, would have been $56.1 million, or $4.61 per share. This amount represents an immediate increase in net tangible book value (deficit) of $4.06 per share of our common stock to existing stockholders and an immediate dilution in net tangible book value (deficit) of $9.39 per share of our common stock to new investors purchasing shares of common stock in this offering.

The following table illustrates this dilution on a per share basis to new investors:

Assumed initial public offering price per share		$14.00
Historical net tangible book deficit per share as of June 30, 2014	$(1,903.60)	
Pro forma increase in net tangible book value per share attributable to pro forma transactions and other adjustments described above	1,904.15	
Pro forma net tangible book value per share before this offering	0.55	
Pro forma increase in net tangible book value (deficit) per share attributable to new investors	4.06	
Pro forma as adjusted net tangible book value (deficit) per share after this offering		4.61
Dilution per share to new investors purchasing common stock in this offering		$ 9.39

Each $1.00 increase (decrease) in the assumed initial public offering price of $14.00 per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, would increase (decrease) our pro forma as adjusted net tangible book value (deficit) by $4.0 million or by $0.33 per share and the dilution to new investors in this offering by $0.67 per share, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

We may also increase or decrease the number of shares we are offering. An increase of 1.0 million shares in the number of shares offered by us would increase our pro forma as adjusted net tangible book value (deficit) as of June 30, 2014, by approximately $13.0 million or by $0.99 per share and decrease the dilution per share to new investors purchasing common stock in this offering by $0.64, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Conversely, a decrease of 1.0 million shares in the number of shares offered by us would decrease our pro forma as adjusted net tangible book value (deficit) as of June 30, 2014, by approximately $13.0 million or by $1.16 per share and increase the dilution per share to new investors purchasing common stock in this offering by $0.75, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

If the underwriters exercise their over-allotment option in full, the pro forma as adjusted net tangible book value (deficit) per share after giving effect to this offering would be $5.03 per share, which amount represents an immediate increase in pro forma net tangible book value (deficit) of $4.48 per share of our common stock to existing stockholders and an immediate dilution in net tangible book value (deficit) of $8.97 per share of our common stock to new investors purchasing shares of common stock in this offering.

The following table summarizes, as of June 30, 2014, after giving effect to the pro forma adjustments noted above, the differences between the number of shares purchased from us, the total consideration paid to us, and the average price per share paid to us by existing stockholders and by new investors purchasing shares in this offering, before deducting underwriting discounts and commissions and estimated offering expenses payable by us, at an assumed initial public offering price of $14.00 per share, the midpoint of the estimated price range set forth on the cover page of this prospectus.

	Shares Purchased		Total Cash Consideration		Average Price Per Share
(in thousands, except per share amounts)	Number	Percent	Amount	Percent	
Existing stockholders	7,881	65%	$ 95,282	61%	$ 12.09
New investors	4,300	35%	60,200	39%	14.00
Total	12,181	100%	$155,482	100%	$ 12.76

The number of shares of our common stock outstanding immediately following this offering is based on 7,880,745 shares of our common stock outstanding as of June 30, 2014, and giving effect to the pro forma transactions described above. This number excludes:

- 923,874 shares of our common stock issuable upon the exercise of stock options outstanding as of June 30, 2014 under the 2007 Plan at a weighted-average exercise price of $7.83 per share;
- 233,415 shares of our common stock based upon 13,104,619 shares of our common stock outstanding as of June 30, 2014 on a fully diluted basis immediately following this offering, issuable upon the exercise of the Bayer Warrant at an exercise price of $1.23 per share, which warrant is expected to remain outstanding upon completion of this offering;
- 2,000,000 shares of our common stock (which includes 72,280 shares reserved for issuance under the 2007 Plan as of June 30, 2014) reserved for issuance under the 2013

Plan, which will become effective upon completion of this offering, as well as any future increases in the number of shares of our common stock reserved for issuance under the 2013 Plan; and

- 131,000 shares of our common stock reserved for issuance under the ESPP, which will become effective upon completion of this offering, as well as any future increases in the number of shares of our common stock reserved for issuance under the ESPP.

If all our outstanding stock options had been exercised as of June 30, 2014, assuming the treasury stock method, our pro forma net tangible book value as of June 30, 2014 (calculated on the basis of the assumptions set forth above) would have been approximately $9.3 million, or $1.12 per share of our common stock, and the pro forma as adjusted net tangible book value would have been $4.86 per share, representing dilution in our pro forma as adjusted net tangible book value per share to new investors of $9.14.

In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that we raise additional capital by issuing equity securities or convertible debt, your ownership will be further diluted.

Effective upon completion of this offering, 2,000,000 shares of our common stock will be reserved for future issuance under our 2013 Plan and 131,000 shares of our common stock will be reserved for future issuance under our ESPP, and the number of reserved shares under each such plan will also be subject to automatic annual increases in accordance with the terms of the plans. New awards that we may grant under our 2013 Plan or shares issued under our ESPP will further dilute investors purchasing common stock in this offering.

SELECTED CONSOLIDATED FINANCIAL DATA

You should read the following selected consolidated financial data together with the "Management's Discussion and Analysis of Financial Condition and Results of Operations" sections of this prospectus and our consolidated financial statements and the accompanying notes appearing at the end of this prospectus. We have derived the consolidated statements of operations data for the years ended December 31, 2012 and 2013 and the consolidated balance sheet data as of December 31, 2012 and 2013 from our audited consolidated financial statements, included elsewhere in this prospectus. The following consolidated statements of operations data for the six months ended June 30, 2013 and 2014 and the consolidated balance sheet data as of June 30, 2014, are derived from our unaudited interim consolidated financial statements, included elsewhere in this prospectus. The unaudited interim consolidated financial statements have been prepared on a basis consistent with our audited consolidated financial statements included in this prospectus and include, in our opinion, all adjustments, consisting only of normal recurring adjustments, necessary for the fair statement of the financial information in those statements. Our historical results are not necessarily indicative of results to be expected for the full year or any period in the future.

	Year Ended December 31,		Six Months Ended June 30,		Period From October 11, 2005 (Date of Inception) to June 30,
(in thousands, except share and per share data)	**2012**	**2013**	**2013**	**2014**	**2014**
Consolidated Statements of Operations Data:					
Operating expenses:					
Research and development	$ 5,240	$ 3,208	$ 1,304	$ 7,011	$ 59,051
General and administrative	3,494	5,363	2,104	3,296	30,916
Total operating expenses	8,734	8,571	3,408	10,307	89,967
Other (expense) income:					
Interest (expense) income, net	(4,673)	(771)	(596)	5	(7,431)
Change in fair value of common stock warrant liability	(431)	(1,943)	(586)	1,794	(1,581)
Change in fair value of convertible preferred stock warrant liability	669	128	128	—	415
Change in fair value of tranche liability	—	(3,144)	(618)	—	(3,144)
Change in fair value of embedded derivative	3,205	—	—	—	1,530
Other (expense) income, net	(1)	130	130	—	119
Total other (expense) income	(1,231)	(5,600)	(1,542)	1,799	(10,092)
Net loss	$ (9,965)	$ (14,171)	$ (4,950)	$ (8,508)	$ (100,059)
Net (loss) income attributable to common stockholders:					
Basic	$ (9,965)	$ (60,454)	$ 71	$ (11,746)	
Diluted	$ (9,965)	$ (60,454)	$ (3,539)	$ (11,746)	
Net (loss) income per share attributable to common stockholders:					
Basic	$(197.73)	$ (1,139.14)	$ 1.41	$ (162.45)	
Diluted	$(197.73)	$ (1,139.14)	$ (0.74)	$ (162.45)	
Weighted-average common shares outstanding used to compute net income (loss) per share attributable to common stockholders[1]:					
Basic	50,397	53,070	50,397	72,306	
Diluted	50,397	53,070	4,775,040	72,306	
Pro forma net loss per share attributable to common stockholders, basic and diluted		$ (1.55)		$ (1.31)	
Pro forma weighted-average common shares outstanding used to compute net loss per share attributable to common stockholders, basic and diluted[1]		5,714,129		7,879,899	

(1) See note 2 to our consolidated financial statements and our condensed consolidated financial statements included elsewhere in this prospectus for an explanation of the method used to calculate the historical and pro forma net (loss) income per share, basic and diluted, and the number of shares used in the computation of the per share amounts.

(in thousands)	As of December 31, 2012	As of December 31, 2013	As of June 30, 2014 (unaudited)
Consolidated Balance Sheet Data:			
Cash, cash equivalents and short-term investments	$ 537	$ 14,126	$ 4,680
Working capital (deficit)	(24,369)	11,814	549
Total assets	1,510	17,061	9,660
Current portion of convertible notes	16,921	—	—
Current portion of long-term debt	4,422	—	—
Embedded derivative liability	287	—	—
Common stock warrant liability	3,880	2,482	688
Convertible preferred stock warrant liability	1,814	—	—
Convertible preferred stock	49,000	140,324	143,562
Deficit accumulated during the development stage	(79,054)	(135,707)	(146,484)
Total stockholders' deficit	(78,288)	(128,475)	(139,252)

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

You should read the following discussion and analysis of our financial condition and results of operations together with the section titled, "Selected Consolidated Financial Data," and our consolidated financial statements and related notes thereto included elsewhere in this prospectus. Some of the information contained in this discussion and analysis or set forth elsewhere in this prospectus, including information with respect to our plans and strategy for our business and related financing, includes forward-looking statements that involve risks and uncertainties. As a result of many factors, including those factors set forth in the "Risk Factors" section of this prospectus, our actual results could differ materially from the results described in or implied by the forward-looking statements contained in the following discussion and analysis.

Overview

We are a late-stage biopharmaceutical company focused on the development and commercialization of our lead product candidate, entinostat, an epigenetic therapy for treatment-resistant cancers. Entinostat was recently granted Breakthrough Therapy designation by the U.S. Food and Drug Administration, or FDA, based on data from our completed randomized Phase 2b clinical trial in estrogen receptor positive, or ER+, locally recurrent or metastatic breast cancer. This trial showed statistically significant improvement in the primary endpoint of progression-free survival, or PFS, and showed statistically significant improvement in overall survival, an exploratory endpoint.

We and our collaborators at the National Cancer Institute, or NCI, will evaluate entinostat in a pivotal Phase 3 clinical trial in hormone receptor, or HR, positive locally advanced or metastatic breast cancer, which we refer to as advanced breast cancer. The Phase 3 clinical trial will be conducted by the Eastern Cooperative Oncology Group – American College of Radiology Imaging Network Cancer Research Group, or ECOG-ACRIN, under sponsorship and funding support from the NCI. We are supporting the Phase 3 clinical trial under a Cooperative Research and Development Agreement, or CRADA, with the NCI and a separate agreement with ECOG-ACRIN. The protocol for the Phase 3 clinical trial was reviewed and agreed upon by the FDA under a Special Protocol Assessment, or SPA, agreement with the NCI in January 2014. ECOG-ACRIN activated the trial in March 2014 with PFS data expected in mid-2017.

To develop entinostat for use as an immunomodulatory agent, we plan to conduct a Phase 1b clinical trial to examine the combination of entinostat with antibodies targeting programmed cell death protein 1, or PD1, or programmed cell death ligand 1, or PDL1, to characterize the safety, define a recommended Phase 2 dose and assess the preliminary clinical activity of this combination. In addition, we also plan to evaluate entinostat with other hormone therapies in breast cancer and with other immune therapies in lung and renal cancers. Additional investigator- and NCI-sponsored trials are being conducted to provide Phase 2 proof-of-concept data for entinostat in metastatic lung cancer and other solid and hematologic cancers.

To further enhance our breast cancer program, we plan to conduct a Phase 2 clinical trial to further study the association between a potential biomarker of entinostat activity and clinical outcome, which we identified in our previous trial. We would require additional financial resources beyond what we expect to have following this offering in order to initiate this trial, and we may not be able to obtain such additional funds.

We have no products approved for commercial sale and have not generated any revenue from product sales to date, and we continue to incur significant research and development and other expenses related to our ongoing operations. As a result, we are not and have never been profitable and have incurred losses in each period since our inception in 2005. For the years ended December 31, 2012 and 2013 and the six months ended June 30, 2014, we reported a net loss of $10.0 million, $14.2 million and $8.5 million, respectively, and as of June 30, 2014, we had an accumulated deficit of $146.5 million. As of June 30, 2014, we had cash and cash equivalents of $4.7 million.

Financial Overview

Revenue

To date, we have not generated any revenues. Our ability to generate revenue and become profitable depends upon our ability to obtain marketing approval of and successfully commercialize our product candidate, entinostat.

Research and Development

Since our inception, we have primarily focused on our clinical development programs. Research and development expenses consist primarily of costs incurred for the development of entinostat, which include:

- expenses incurred under agreements with investigative sites and contract research organizations, or CROs, that conduct our clinical trials;
- employee-related expenses related to our research and development activities, including salaries, benefits, travel and stock-based compensation expenses;
- manufacturing process-development, clinical supplies and technology-transfer expenses;
- license fees and milestone payments under our license agreements;
- consulting fees paid to third parties;
- allocated facilities and overhead expenses; and
- costs associated with regulatory operations and regulatory compliance requirements.

Internal and external research and development costs are expensed as they are incurred. Costs for certain development activities, such as clinical trials, are recognized based on an evaluation of the progress to completion of specific tasks using data such as patient enrollment, clinical site activations, or other information provided to us by our vendors.

As we expand the clinical development of entinostat, the amount of research and development expenses allocated to external spending will continue to grow, while we expect our internal spending to grow at a slower and more controlled pace. We have incurred a total of $59.1 million in research and development expenses from inception through June 30, 2014.

Conducting a significant amount of research and development is central to our business model. Drug candidates in late stages of clinical development generally have higher development costs than those in earlier stages of clinical development, primarily due to the increased size and duration of late-stage clinical trials. We plan to increase our research and development expenses for the foreseeable future as we seek to complete the development of

entinostat. The successful development of entinostat is highly uncertain. At this time, we cannot reasonably estimate the nature, timing or costs of the efforts that will be necessary to complete the remainder of the development of entinostat for the period, if any, in which material net cash inflows from these potential drug candidates may commence. Clinical development timelines, the probability of success and development costs can differ materially from expectations.

General and Administrative

General and administrative expenses consist primarily of salaries and related benefits, including stock-based compensation, related to our executive, finance, business development and support functions. Other general and administrative expenses include facility-related costs not otherwise allocated to research and development expenses, travel expenses for our general and administrative personnel and professional fees for auditing, tax, and legal services. We anticipate that our general and administrative expenses will increase in future periods, reflecting both increased costs in connection with the potential future commercialization of entinostat, an expanding infrastructure and increased professional fees associated with being a public reporting company.

Sales and Marketing

Selling and marketing expenses consist primarily of salaries and benefits for employees in the marketing, commercial and sales functions. Other significant expenses include professional and consulting fees related to these functions. Though we have incurred immaterial sales and marketing expenses to date as we continue primarily with the clinical development of our drug candidate programs, we expect to begin to incur increased selling and marketing expenses in anticipation of the commercialization of entinostat. These increased expenses will include payroll-related expenses as we add employees in the commercial departments, costs related to the initiation and operation of our sales and distribution network, and marketing related costs.

Interest Income (Expense)

Interest income consists of interest income earned on our cash and cash equivalents. Interest expense consists of interest expense on amounts borrowed under our term loan facility, capital leases and convertible notes.

Change in Fair Value of Common and Convertible Preferred Stock Warrant Liabilities

The common and convertible preferred stock warrant liabilities are associated with warrants to purchase stock issued to lenders under our convertible notes, preferred stock financings and common stock warrants issued with license agreements. The change in fair value consists of the calculated change in value based upon the fair value of the underlying security at the end of each reporting period as calculated using the Black-Scholes option pricing model. Gains and losses arising from changes in fair value are recognized in other income (expense) in the consolidated statements of operations and comprehensive loss.

Change in Fair Value of Embedded Derivatives

From 2010 through 2012, we entered into a number of convertible note agreements, which had terms and conditions allowing the note holders to put the notes to us prior to their expiration or conversion into convertible preferred stock in a qualified financing. We determined these potential payments were embedded derivatives. At each balance sheet date prior to their conversion, we calculated the fair value of these rights using a probability-weighted expected-

return model, or PWERM. Gains and losses arising from changes in fair value are recognized in other income (expense) in the consolidated statements of operations and comprehensive loss.

Change in Fair Value of Tranche Financing Liability

In 2013, we entered into a preferred stock financing pursuant to a Series B-1 preferred stock purchase agreement, dated March 8, 2013, as amended, or the Series B-1 financing, to sell shares to investors in tranches during the period from March 2013 through November 2013. The right to participate in the future financing tranches was determined to be a freestanding instrument. At the end of each reporting period, we determined the fair value of those rights using the Black-Scholes option pricing model. Gains and losses arising from changes in fair value are recognized in other income (expense) in the consolidated statements of operations and comprehensive loss.

Recent Accounting Pronouncements

From time to time, new accounting pronouncements are issued by the Financial Accounting Standards Board, or FASB, or other standard setting bodies and adopted by us as of the specified effective date. Unless otherwise discussed, we believe that the impact of recently issued standards that are not yet effective will not have a material impact on its financial position or results of operations upon adoption.

Critical Accounting Policies and Use of Estimates

Our management's discussion and analysis of financial condition and results of operations is based on our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States, or GAAP. The preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements, as well as the reported expenses during the reporting periods. These items are monitored and analyzed by us for changes in facts and circumstances, and material changes in these estimates could occur in the future. We base our estimates on historical experience and on various other factors that we believe are reasonable under the circumstances; the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Changes in estimates are reflected in reported results for the period in which they become known. Actual results may differ materially from these estimates.

While our significant accounting policies are more fully described in note 1 to our consolidated financial statements included elsewhere in this prospectus, we believe that the following accounting policies are critical to the process of making significant judgments and estimates in the preparation of our consolidated financial statements and understanding and evaluating our reported financial results.

Accrued Research and Development Expenses

As part of the process of preparing our consolidated financial statements, we are required to estimate our accrued research and development expenses. This process involves reviewing contracts and vendor agreements, communicating with our applicable personnel to identify services that have been performed on our behalf and estimating the level of service performed and the associated cost incurred for the service when we have not yet been invoiced or otherwise notified of actual cost. The majority of our service providers invoice us monthly in

arrears for services performed. We make estimates of our accrued expenses as of each balance sheet date in our consolidated financial statements based on facts and circumstances known to us at that time. Examples of estimated accrued research and development expenses include fees paid to CROs and investigative sites in connection with clinical studies and to vendors related to product manufacturing and development of clinical supplies.

We base our expenses related to clinical studies on our estimates of the services received and efforts expended pursuant to contracts with multiple research institutions and CROs that conduct and manage clinical studies on our behalf. The financial terms of these agreements are subject to negotiation, vary from contract to contract and may result in uneven payment flows and expense recognition. Payments under some of these contracts depend on factors out of our control, such as the successful enrollment of patients and the completion of clinical trial milestones. In accruing service fees, we estimate the time period over which services will be performed and the level of effort to be expended in each period. If the actual timing of the performance of services or the level of effort varies from our estimate, we adjust the accrual accordingly. Although we do not expect our estimates to be materially different from amounts actually incurred, if our estimates of the status and timing of services performed differ from the actual status and timing of services performed, we may report amounts that are too high or too low in any particular period. To date, we have not experienced any significant adjustments to our estimates.

Stock-based Compensation

We issue stock-based awards to employees and non-employees, generally in the form of stock options. We account for our stock-based awards in accordance with FASB Accounting Standards Codification, or ASC, Topic 718, *Compensation—Stock Compensation*, or ASC 718. ASC 718 requires all stock-based payments to employees, including grants of employee stock options and modifications to existing stock options, to be recognized in the consolidated statements of operations and comprehensive loss based on their fair values. We account for stock-based awards to non-employees in accordance with FASB ASC Topic 505-50, *Equity-Based Payments to Non-Employees*, which requires the fair value of the award to be re-measured at fair value as the award vests. We recognize the compensation cost of stock-based awards on a straight-line basis over the vesting period of the award for employees and non-employees, which is generally four years. Compensation expense related to our stock-based awards is subject to a number of estimates, including the estimated volatility and underlying fair value of our common stock as well as the estimated life of the awards. For a detailed description of how we estimate fair value for purposes of option grants and the methodology used in measuring stock-based compensation expense, see “Stock-Based Compensation and Common Stock Valuations” below. Following the completion of this offering, stock option values will be determined based on the market price of our common stock on The Nasdaq Stock Market.

Derivative Instruments

We have recorded the potential payments that would be made to note holders in the event of a sale of our company prior to the principal payment due date as a derivative financial liability. Derivative financial liabilities are initially recorded at fair value with gains and losses arising from changes in fair value recognized in the consolidated statements of operations and comprehensive loss at each period end while such instruments are outstanding. The liabilities are being valued using a PWERM approach. The significant assumptions used in estimating the fair value of the derivative financial liability include the total payments due upon the potential event, the likelihood of the event occurring and a discount rate related to the time in which the

event may occur. In connection with the first tranche of the Series B-1 financing, the note holders converted the debt into convertible preferred stock without triggering the potential payments due upon a sale of the company, thus resulting in the derivative financial liability being de-recognized on that date.

We have also recorded common and convertible preferred stock warrants issued to investors and note holders and common stock warrants issued with license agreements as derivative financial liabilities. These warrants are initially recorded at fair value with gains and losses arising from changes in fair value recognized in the consolidated statements of operations and comprehensive loss at each period end while such instruments are outstanding. The liabilities are valued using a Black-Scholes option-pricing model. The significant assumptions used in estimating the fair value of our warrant liabilities include the exercise price, volatility of the stock underlying the warrant, risk-free interest rate, estimated fair value of the stock underlying the warrant, and the estimated life of the warrant. With the exception of the Bayer common stock warrant, the common and convertible preferred stock warrants issued to investors and note holders were canceled in connection with the first tranche of the Series B-1 financing in March 2013, and the liabilities were de-recognized on that date.

We have determined that our obligation to issue, and our investors' obligation to purchase, additional shares of Series B-1 convertible preferred stock represent a freestanding instrument. The freestanding tranche liability was initially recorded at fair value, with gains and losses arising from changes in fair value recognized in other income (expense) in the consolidated statements of operations and comprehensive loss at each period end while such instruments are outstanding. The liabilities were valued using a Black-Scholes option pricing model. The significant assumptions used in estimating the fair value of our tranche liabilities included the exercise price, volatility of the stock underlying the liability, risk-free interest rate, estimated fair value of the stock, and the estimated life of the right. Upon the closings of the remaining tranches of the Series B-1 financing in November 2013, we de-recognized the tranche obligation, which resulted in a net increase in the proceeds allocated to the shares of Series B-1 convertible preferred stock of $7.0 million. The fair value of the remaining tranche obligations was re-measured just prior to the closing and as a result of the changes in the fair value of the tranche obligations, we recorded an aggregate of $3.1 million to other income (expense) in the consolidated statements of operations and comprehensive loss during the year ended December 31, 2013.

Stock-based Compensation and Common Stock Valuations

Stock-based Compensation

We estimate the fair value of our stock-based awards to employees and non-employees using the Black-Scholes option pricing model, which requires the input of highly subjective assumptions, including (a) the expected volatility of our stock, (b) the expected term of the award, (c) the risk-free interest rate (d) expected dividends and (e) the fair value of our common stock on the date of grant. Due to the lack of a public market for the trading of our common stock and a lack of company-specific historical and implied volatility data, we have based our estimate of expected volatility on the historical volatility of a group of publicly traded companies in the life sciences and biotechnology industries generally in a similar stage of development as ourselves. For these analyses, we have selected companies that we consider broadly comparable to our company and with historical share price information sufficient to meet the expected life of the stock-based awards. We compute the historical volatility data using the daily closing prices for the selected companies' shares during the equivalent period of the calculated expected term of our stock-based awards. We will continue to apply this

methodology until a sufficient amount of historical information regarding the volatility of our own stock price becomes available. We have estimated the expected life of our employee stock options using the "simplified" method, whereby, the expected life equals the average of the vesting term and the original contractual term of the option. For options granted to employees in 2013, we determined the expected term based on an average of expected terms used by a peer group of similar public companies. The risk-free interest rates for periods within the expected life of the option are based on the U.S. Treasury yield curve in effect during the period the options were granted.

We are also required to estimate forfeitures at the time of grant and revise estimates in subsequent periods if actual forfeitures differ from estimates. We use historical data to estimate pre-vesting option forfeitures and record stock-based compensation expense only for those awards that are expected to vest. To the extent that actual forfeitures differ from our estimates, the difference is recorded as a cumulative adjustment in the period the estimates were revised. Stock-based compensation expense recognized in the consolidated financial statements is based on awards that are ultimately expected to vest.

We have computed the fair value of employee and non-employee stock options at date of grant using the following weighted-average assumptions:

	Years Ended December 31,		Six Months Ended June 30,	
	2013	2014	2013	2014
Expected term (in years)	6.64	6.29	6.42	5.90
Volatility rate	66.67%	68.42%	68.50%	72.00%
Risk-free interest rate	1.45%	1.13%	0.98%	1.79%
Expected dividend yield	0.00%	0.00%	0.00%	0.00%

Stock-based compensation for employees and non-employees was allocated as outlined below (in thousands):

	Years Ended December 31,		Six Months Ended June 30,	
(in thousands)	2013	2014	2013	2014
Research and development	$ 40	$ 326	$ 158	$ 268
General and administrative	99	1,089	667	695
Total	$ 139	$ 1,415	$ 825	$ 963

As of June 30, 2014, total unrecognized compensation expense was $3.2 million, net of related forfeiture estimates; and the weighted-average remaining requisite service period was 2.64 years. We expect the impact of our stock-based compensation expense for stock options granted to employees and non-employees to grow in future periods due to the potential increases in the value of our common stock and in headcount.

Common Stock Valuations

We are a private company with no public market for our common stock. Therefore, our board of directors determined the fair value of the common stock considering, in part, the work of an independent third-party valuation specialist. The valuations were performed in accordance with the guidance outlined in the American Institute of Certified Public Accountants Practice Aid, *Valuation of Privately-Held Company Equity Securities Issued as Compensation*, also known as

the Practice Aid. In conducting these valuations, our board of directors considered all objective and subjective factors that it believed to be relevant, including its and management's best estimates of our business condition, prospects and operating performance at each grant date. The valuations, assumptions and methodologies included, among other things:

- any recent contemporaneous third-party valuations prepared in accordance with methodologies outlined in the Practice Aid;
- the prices of our convertible preferred stock sold to investors in arm's length transactions and the rights, preferences and privileges of our convertible preferred stock as compared to those of our common stock, including the liquidation preferences of our convertible preferred stock;
- our results of operations, financial position and the status of research and development efforts;
- the lack of liquidity of our common stock as a private company;
- our stage of development and business strategy and the material risks related to our business and industry;
- the composition of, and changes to, our management team and board of directors;
- the achievement of enterprise milestones, including entering into collaboration and license agreements;
- the valuation of comparable publicly traded companies in the life science and biotechnology sectors, as well as recently completed mergers and acquisitions of peer companies;
- the likelihood of achieving a liquidity event for our stockholders, such as an initial public offering, or IPO, or a sale of our company, given prevailing market conditions; and
- any external market conditions affecting the life science and biotechnology sectors.

There are significant judgments and estimates inherent in the determination of the fair value of our common stock. These judgments and estimates include assumptions regarding our future operating performance, the time to completing an IPO or other liquidity event and the determinations of the appropriate valuation methods. If we had made different assumptions, our stock-based compensation expense, net loss and net loss per common share could have been significantly different.

Common Stock Valuation Methodologies

The valuations discussed below were prepared in accordance with the guidelines in the Practice Aid, which prescribes several valuation approaches for estimating the value of an enterprise, such as the cost, market and income approaches and various methodologies for allocating the value of an enterprise to its common stock. We used the market approach, which is based on the assumption that the value of an asset is equal to the value of a substitute asset with the same characteristics. The following market approaches were utilized in our various valuations:

- ***Guideline public company method***. The guideline public company market approach estimates the value of a business by comparing a company to comparable publicly traded companies.
- ***Precedent transaction method***. The precedent transaction market approach estimates the value of a business based on the utilization of a company's own relevant stock transactions.

Methods Used to Allocate Our Enterprise Value to Classes of Securities

In accordance with the Practice Aid, we considered the various methods for allocating the enterprise value across our classes and series of capital stock to determine the fair value of our common stock at each valuation date. The methods we considered consisted of the following:

- ***Current value method***. Under the current value method, once the fair value of the enterprise is established, the value is allocated to the various series of preferred and common stock based on their respective seniority, liquidation preferences or conversion values, whichever is greatest. This method was considered but not utilized in any of the valuations discussed below.
- ***Option pricing method***. Under the option pricing method, shares are valued by creating a series of call options with exercise prices based on the liquidation preferences and conversion terms of each equity class. The values of the preferred and common stock are inferred by analyzing these options. This method was considered but not utilized in any of the valuations discussed below.
- ***PWERM.*** Under the PWERM approach, the value of the various equity securities are estimated based upon an analysis of future values for the enterprise assuming various future outcomes. Share value is based upon the probability-weighted present value of expected future investment returns, considering each of the possible future outcomes available to the enterprise, as well as the rights of each share class.

We selected the PWERM approach to allocate the equity value among the various share classes given our stage of development, the availability of relevant data and our expectation that we are able to forecast distinct future liquidity scenarios as of each valuation date.

Under the PWERM approach, share value is derived from the probability-weighted present value of expected future investment returns, considering each of the possible outcomes available to us, as well as the economic and control rights of each share class. For each valuation date described below, the fair value of our common stock was estimated using a probability-weighted analysis of the present value of the returns afforded to our common stockholders under several future exit or liquidity event scenarios, including (1) an IPO, (2) a trade sale of our company at a high premium to the cumulative amounts invested by our convertible preferred stock investors, or trade sale high, (3) a trade sale of our company at a lesser premium to the cumulative amounts invested by convertible preferred stock investors, or trade sale low and (4) a trade sale of our company at a value below the cumulative amounts invested by convertible preferred stock investors, or trade sale below liquidation preference. In each scenario the projected equity values were based on a review of both guideline IPO and merger and acquisition, or M&A, transactions involving life science and biotechnology companies that we considered broadly comparable to our company. The timing of each scenario was, in part, based on the plans of our board of directors and management and generally coincided with the expected availability of clinical trial results. In the IPO scenario, we assumed all outstanding shares of our convertible preferred stock would convert into common stock. In the trade sale scenarios, the projected equity value was allocated to the various share classes, as of the liquidity date, based on the respective rights and preferences outlined in our certificate of incorporation.

After the projected equity value in each scenario was allocated to the various share classes, we calculated the present value of each share class using an appropriate risk-adjusted discount rate based on consideration of the venture capital rates of return detailed in the Practice Aid and an analysis of other quantitative and qualitative factors considered pertinent to estimating the discount rate. Next, we applied a discount for lack of marketability to our common shares because

we were valuing a minority interest in our company as a closely held, non-public company with no liquid market for its shares. The discount for lack of marketability was based on quantitative models (protective put option calculation), as well as empirical studies of restricted stock issued by publicly traded companies and private placements by pre-IPO companies. We also considered the rights and privileges of our convertible preferred stock relative to our common stock, including anti-dilution protection, cumulative dividend rights, protective provisions in our certificate of incorporation and rights to participate in future rounds of financing. Finally, we assigned a probability weighting to each scenario based on our estimate of the likelihood of occurrence, as of each valuation date. In each case the future projected enterprise values were based on a review of both guideline IPO and M&A transactions involving life science and biotechnology companies that we considered broadly comparable to our company.

Contemporaneous Common Stock Valuations

March 31, 2012 Valuation

Using the PWERM approach, we estimated that a share of our common stock had a value of $38.13 per share as of March 31, 2012, an increase of $7.38 from the previous valuation we had obtained in November 2011. The valuation reflected significant progress in preparing for a financing or strategic transaction, including hiring a chief executive officer with significant late-stage clinical development and public company experience. For the March 2012 valuation, significant assumptions for the PWERM approach included the probability of occurrence of each scenario, timing to the liquidity event, discount rate and discount for lack of marketability.

The key valuation assumptions included those noted in the following table:

	IPO Short Term	Trade Sale High	Trade Sale Low	Sales Below Liquidation Preference
Probability of scenario	50%	10%	10%	30%
Discount for marketability	30%	30%	30%	30%
Timeline to liquidity (in years)	0.75	3.25	3.25	3.25
Discount rate—common stock	35%	35%	35%	35%

For the IPO scenario, we analyzed IPOs since March 2010, taking the pre-money equity value of those companies, from which we subtracted cash and debt to derive an implied enterprise value. The derived enterprise value was adjusted to reflect the additional cash necessary to reach an expected liquidity date of December 2012. For the trade sale scenarios, we estimated our enterprise value by analyzing M&A transactions involving certain life science and biotechnology companies over the period from April 2009 to March 2012, which we considered broadly comparable to our company. The projected enterprise values were adjusted to reflect the additional cash necessary to reach the expected liquidity date of June 2015, which corresponded with the then-expected availability of the Phase 3 clinical trial results. The enterprise value selected in the trade sale high, low and below liquidation preference scenarios reflected the expectation that clinical trial results at the time of liquidity may range from positive, mixed, or negative, respectively.

We considered the fact that our stockholders and option holders cannot freely trade our common stock in the public markets and, accordingly, applied a discount of 30% to reflect the lack of marketability of our common stock.

We then probability-weighted the discounted values per share under each scenario and summed the resulting weighted values to determine the fair value, per share, of our common stock.

December 31, 2012 Valuation

Using the PWERM approach, we estimated that a share of our common stock had a value of $34.44 per share in as of December 31, 2012, a decrease of $3.69 from the prior March 2012 valuation. The decrease in the common stock valuation reflected our liquidity constraints, our then-expectations as to the amount of capital required to fund the Phase 3 clinical trial and the lack of a collaborator at the time. For the December 2012 valuation, significant assumptions for the PWERM approach included the probability of occurrence of each scenario, timing to a liquidity event, discount rate and discount for lack of marketability.

The key valuation assumptions included those noted in the following table:

	IPO Short Term	Trade Sale High	Trade Sale Low	Sales Below Liquidation Preference
Probability of scenario	10%	20%	20%	50%
Discount for marketability	30%	30%	30%	30%
Timeline to liquidity (in years)	1.00	3.50	3.50	3.50
Discount rate—common stock	35%	35%	35%	35%

For the IPO scenario, we applied a consistent approach to estimating our IPO enterprise value based on comparable IPO transactions and investor expectations. The projected pre-money enterprise value was adjusted to reflect the additional cash necessary to reach the IPO liquidity date, which was advanced one year to December 2013. This resulted in a substantial decrease in the probability assigned to an IPO from 50% in the March 2012 valuation to 10% in the December 2012 valuation. In connection with the decrease in the IPO scenario, we projected an increased probability in each of the trade sale scenarios, with the largest increase in the sale below liquidation preference to 50%. This increase reflected a lower likelihood of a successful strategic transaction outcome. Similarly for the trade sale scenarios, we again analyzed M&A transactions involving targets completing Phase 2 clinical development. The projected enterprise values were adjusted to reflect the additional cash necessary to reach an expected liquidity date of June 2016, corresponding to the then-expected availability of Phase 3 clinical trial results. We applied a discount of 30% to reflect the lack of marketability of our common stock. We then probability-weighted the discounted values per share, under each scenario, and summed the resulting weighted values to determine the fair value, per share, of our common stock.

March 31, 2013 Valuation

Using the PWERM approach, we estimated that a share of our common stock had a value of $2.46 per share as of March 31, 2013, a decrease of $31.98 from the prior December 2012 valuation. For the March 2013 valuation, significant assumptions included the probability of occurrence of each scenario, timing to the liquidity event, discount rate and discount for lack of marketability. The key valuation assumptions included those noted in the following table:

	IPO Short Term	Trade Sale High	Trade Sale Low	Sales Below Liquidation Preference
Probability of scenario	5%	10%	20%	65%
Discount for marketability	30%	30%	30%	30%
Timeline to liquidity (in years)	1.00	3.25	3.25	3.25
Discount rate—common stock	35%	35%	35%	35%

The decrease in valuation between December 31, 2012 and March 31, 2013 resulted primarily from a recapitalization of our company, including a 10-for-1 forward stock split of our

Series A convertible preferred stock, effective on March 8, 2013. On that date, we entered into a series of agreements with existing Series A convertible preferred stockholders and convertible note holders. In connection with those agreements, the existing Series A shares were split 10-for-1, increasing the outstanding Series A shares from 0.4 million to 4.4 million. The convertible note holders agreed to convert the outstanding notes into Series B-1 convertible preferred stock and Series B convertible preferred stock, each at $11.19 per share, resulting in the issuance of an additional 1.8 million preferred shares in exchange for $19.6 million in note principal and accrued interest. The number of common shares outstanding remained the same from December 31, 2012 and March 31, 2013 at 50,397 shares. Due to the changes in the apportionment of the enterprise value between the preferred and common shares, the value of the enterprise allocated to common stockholders declined from the December 2012 valuation to the March 2013 valuation.

The decrease in valuation between December 31, 2012 and March 31, 2013 also resulted from a slight decrease in the probability assigned to an IPO from 10% to 5%. In addition to the decrease in the IPO scenario, we projected a decrease in the trade sale high scenario probability from 20% to 10%, maintained the trade sale low scenario probability at 20%, and an increase in the sale below liquidation preference probability from 50% to 65%. These changes reflected a higher likelihood of a low value strategic transaction outcome. For the IPO scenario, we analyzed IPOs since March 2010, taking the pre-money value of those companies, from which we subtracted cash and debt to derive an implied enterprise value. The derived enterprise value was adjusted to reflect the additional cash necessary to reach an expected liquidity date, which was advanced to March 2014. For the trade sale scenarios, we estimated our enterprise value by analyzing M&A transactions involving certain life science and biotechnology companies over the period from April 2009 to March 2013, which we considered broadly comparable to our company. The projected enterprise values were adjusted to reflect the additional cash necessary to reach the expected liquidity date of June 2016, which corresponded with the then-expected availability of the Phase 3 clinical trial results.

We applied a discount of 30% to reflect the lack of marketability of our common stock. We then probability-weighted the discounted values per share under each scenario and summed the resulting weighted values to determine the fair value, per share, of our common stock.

June 30, 2013 Valuation

Using the PWERM approach, we estimated that a share of our common stock had a value of $9.84 per share as of June 30, 2013, an increase of $7.38 from the prior March 2013 valuation. For the June 2013 valuation, significant assumptions included the probability of occurrence of each scenario, timing to the liquidity event, discount rate and discount for lack of marketability. The key valuation assumptions included those noted in the following table:

	IPO Short Term	Trade Sale High	Trade Sale Low	Sales Below Liquidation Preference
Probability of scenario	50%	15%	15%	20%
Discount for marketability	15%	30%	30%	30%
Timeline to liquidity (in years)	0.75	3.00	3.00	3.00
Discount rate—common stock	35%	35%	35%	35%

The increase in valuation between March 31, 2013 and June 30, 2013 resulted from a significant increase in the probability assigned to an IPO from 5% to 50%. In connection with the increase in the IPO scenario, we projected changes to the probabilities assigned to trade sale

scenarios, including a corresponding decrease in the sale below liquidation preference likelihood from 65% to 20%. The primary reasons for the increase in the likelihood of an IPO included:

- progress in securing an outside lead investor for the Series B-1 financing;
- NASDAQ Biotechnology Index increasing 12% from April 1, 2013 to June 30, 2013;
- improved capital market conditions for biotechnology companies as evidenced by a recent increase in the number of IPOs and their valuations;
- increased likelihood of our board of directors recommending that we pursue an IPO; and
- decreased timing to a prospective liquidity event.

For the IPO scenario, we analyzed IPOs since March 2010, taking the pre-money value of those companies, from which we subtracted cash and debt to derive an implied enterprise value. The derived enterprise value was adjusted to reflect the additional cash necessary to reach an expected liquidity date, which remained March 2014. For the trade sale scenarios, we estimated our enterprise value by analyzing M&A transactions involving certain life science and biotechnology companies over the period from April 2009 to June 2013, which we considered broadly comparable to our company. The projected enterprise values were adjusted to reflect the additional cash necessary to reach the expected liquidity date of June 2016, which corresponded with the then-expected availability of the Phase 3 clinical trial results.

We applied a separate discount for lack of marketability in the IPO scenario of 15% due to the increase in the probability of an IPO and the condensed time to liquidity of this scenario. We applied a 30% discount for lack of marketability to our common stock in the trade sale scenarios. We then probability-weighted the discounted values per share under each scenario and summed the resulting weighted values to determine the fair value, per share, of our common stock.

September 30, 2013 Valuation

Using the PWERM approach, we estimated that a share of our common stock had a value of $14.76 per share as of September 30, 2013, an increase of $4.92 from the prior June 2013 valuation. For the September 2013 valuation, significant assumptions for the PWERM included the probability of occurrence of each scenario, timing to the liquidity event, discount rate and discount for lack of marketability. The key valuation assumptions included those noted in the following table:

	IPO Short Term	Trade Sale High	Trade Sale Low	Sales Below Liquidation Preference
Probability of scenario	70%	10%	10%	10%
Discount for marketability	10%	30%	30%	30%
Timeline to liquidity (in years)	0.41	3.75	3.75	3.75
Discount rate—common stock	35%	35%	35%	35%

The increase in valuation between June 30, 2013 and September 30, 2013 resulted from a significant increase in the probability assigned to an IPO from 50% to 70% and a corresponding decrease in each of the trade sale probabilities to 10%, as well as a decrease in the sale below liquidation preference likelihood from 20% to 10%. The decrease in the sale below liquidation preference scenario reflected a lower likelihood of such a transaction in light of our company moving forward with a likely IPO.

The primary reasons for the increase in the likelihood of an IPO included:

- NASDAQ Biotechnology index increasing 17% from July 1, 2013 to September 30, 2013;
- improved capital market conditions for biotechnology companies as evidenced by a recent increase in the number of IPOs and their valuations;
- our board of directors endorsing an IPO path in the September 20, 2013 meeting; and
- the scheduling of the organizational meeting for our potential IPO.

For the IPO scenario, we analyzed IPOs since March 2010, taking the pre-money value of those companies, from which we subtracted cash and debt to derive an implied enterprise value. The derived enterprise value was adjusted to reflect the additional cash necessary to reach an expected liquidity date, which was moved back to February 2014. For the trade sale scenarios, we estimated our enterprise value by analyzing M&A transactions involving certain life science and biotechnology companies over the period from April 2009 to September 2013, which we considered broadly comparable to our company. The projected enterprise values were adjusted to reflect the additional cash necessary to reach the expected liquidity date of June 2017, which corresponded with the then-expected availability of the Phase 3 clinical trial results.

We applied a discount of 10% and 30% for lack of marketability in the IPO and sale scenarios, respectively. We then probability-weighted the value per share under each scenario and summed the resulting weighted values per share to determine the fair value per share of our common stock.

December 12, 2013 Valuation

On December 12, 2013, in anticipation of a stock option grant, which was subsequently approved on January 23, 2014, we obtained a valuation of our common stock using the PWERM approach. In that valuation we estimated that a share of our common stock had a value of $16.85 per share, an increase of $2.09 from the prior September 2013 valuation. For the December 2013 valuation, significant assumptions for the PWERM included the probability of occurrence of each scenario, timing to the liquidity event, discount rate and discount for lack of marketability. The key valuation assumptions included those noted in the following table:

	IPO Short Term	Trade Sale High	Trade Sale Low	Sales Below Liquidation Preference
Probability of scenario	80%	6.7%	6.7%	6.7%
Discount for marketability	5%	30%	30%	30%
Timeline to liquidity (in years)	0.21	3.55	3.55	3.55
Discount rate—common stock	35%	35%	35%	35%

The increase in valuation between September 30, 2013 and December 12, 2013 resulted from an increase in the probability assigned to an IPO from 70% to 80% and a corresponding decrease in each of the trade sale probabilities to 6.7%, as well as a decrease in the sale below liquidation preference likelihood from 10% to 6.7%. The decrease in the sale below liquidation preference scenario reflected a lower likelihood of such a transaction in light of our company moving forward with a likely IPO. For the IPO scenario, the discount for lack of marketability was reduced from 10% to 5% reflecting the approach of the planned IPO, which would provide greater marketability for the stock.

The likelihood of an IPO was increased based on the confidential submission of our Draft Registration Statement on Form S-1 with the Securities and Exchange Commission, or SEC, on November 15, 2013, the closing of our remaining tranches of the Series B-1 financing and the continued favorable economic environment as evidenced by the NASDAQ Biotechnology Index increasing an additional 3% from September 30, 2013 to December 12, 2013.

For the IPO scenario, we analyzed IPOs since March 2010, taking the pre-money value of those companies, from which we subtracted cash and debt to derive an implied enterprise value. The derived enterprise value was adjusted to reflect the additional cash necessary to reach an expected liquidity date, which was kept at February 2014. For the trade sale scenarios, we estimated our enterprise value by analyzing M&A transactions involving certain life science and biotechnology companies over the period from April 2009 to December 2013, which we considered broadly comparable to our company. The projected enterprise values were adjusted to reflect the additional cash necessary to reach the expected liquidity date of June 2017, which corresponded with the then-expected availability of the Phase 3 clinical trial results.

We applied a discount of 5% and 30% for lack of marketability in the IPO and sale scenarios, respectively. We then probability-weighted the value per share under each scenario and summed the resulting weighted values per share to determine the fair value per share of our common stock.

June 30, 2014 Valuation

Using the PWERM approach, we estimated that a share of our common stock had a value of $5.05 per share, a decrease of $11.80 from the prior December 2013 valuation. For the June 2014 valuation, significant assumptions for the PWERM included the projected enterprise value, probability of occurrence of each scenario, timing to the liquidity event, discount rate and discount for lack of marketability. The key valuation assumptions included those noted in the following table:

	IPO Short Term	Trade Sale High	Trade Sale Low	Sales Below Liquidation Preference
Probability of scenario	60%	12.0%	12.0%	16.0%
Discount for marketability	5%	30%	30%	30%
Timeline to liquidity (in years)	0.25	3.00	3.00	3.00
Discount rate—common stock	35%	35%	35%	35%

The decrease in valuation between December 12, 2013 and June 30, 2014 resulted primarily from a decrease in the projected enterprise values used in the PWERM IPO scenario, as well as a reduced probability assigned to that scenario. For the IPO scenario, the projected enterprise value was decreased from an estimated $185,000 in December 2013 to an estimated $60,000 in June 2014, and the probability assigned to that scenario was decreased from 80% to 60%. This decrease in valuation and the lower probability of completion reflected the increasingly difficult market conditions in effect for biotechnology IPOs at that time.

For the trade sale scenarios, we estimated our enterprise value by analyzing M&A transactions involving certain life science and biotechnology companies over the period from April 2009 to June 2014, which we considered broadly comparable to our company. The projected enterprise values were adjusted to reflect the additional risk associated with the IPO market conditions. The 40% overall probability of a trade sale was divided among the three trade sale scenarios (two, three and four) with 60% divided between scenarios two and three and the remaining 40% assigned to scenario four. This division was based on an assumed 60% probability of technical success in a Phase 3 study.

We applied the same discount of 5% and 30% for lack of marketability in the IPO and sale scenarios, respectively. We then probability-weighted the value per share under each scenario and summed the resulting weighted values per share to determine the fair value per share of our common stock.

Initial Public Offering Price

In May 2014, our board of directors determined the estimated price range for this offering, as set forth on the cover page of this prospectus. As is typical in IPOs, the estimated price range for this offering was not derived using a formal determination of fair value of our common stock, but was determined based on our best estimates following discussions between us and our managing underwriters. Among the factors that were considered in setting this range were the following:

- an analysis of the typical valuation ranges seen in recent IPOs for companies in our industry;
- the general condition of the securities markets and the recent market prices of, and the demand for, publicly traded common stock of generally comparable companies; and
- assumptions regarding the demand for our common stock and the public trading market for biopharmaceutical companies such as us.

We believe the difference between our estimate of the fair value of our common stock of $16.85 in December 2013 and the midpoint of the estimated price range for this offering is attributable to updated market conditions used in the determination of the IPO price after consultation with the managing underwriters for this offering.

Retrospective Valuations Used for Financial Reporting Purposes

In September 2013, we decided to pursue an IPO in addition to exploring strategic alternatives. As a result, in connection with that reexamination, we prepared retrospective valuations of the fair value of our common stock, for financial reporting purposes, as of June 30 and September 30, 2012, and May 9, 2013 to assist our board of directors in reevaluating the fair value of our common stock as of those dates. The June and September 2012 valuations were used to determine the value of our outstanding common stock and convertible preferred stock warrant liabilities, as well as to assess whether there was a beneficial conversion feature at the time of issuance of the June 2012 convertible notes. We also conducted a valuation of our common stock on May 9, 2013, the date of our offer of exchange for outstanding common stock options with eight employees.

June 30, 2012 Valuation

We conducted a valuation of our common stock as of June 30, 2012. The June 2012 valuation utilized the PWERM approach to allocate the equity value to the common stock. For the June 2012 valuation, significant assumptions for the PWERM approach included the probability of occurrence of each scenario, discount for the lack of marketability, timing to the liquidity event and discount rate. The key valuation assumptions included those noted in the following table:

	IPO Short Term	Trade Sale High	Trade Sale Low	Sales Below Liquidation Preference
Probability of scenario	35%	10%	15%	40%
Discount for marketability	30%	30%	30%	30%
Timeline to liquidity (in years)	0.75	3.25	3.25	3.25
Discount rate—common stock	35%	35%	35%	35%

The resulting estimated fair value of our common stock as of June 30, 2012 was $35.67 per share, a decrease of $2.46 from the March 2012 valuation. This decline resulted from a decrease in the probability assigned to an IPO from 50% in the March 2012 valuation to 35% in the June 2012 valuation, and an associated increase in the sale below liquidation preference from 30% to 40%. This change reflects a lower likelihood of a successful strategic transaction outcome compared to at the March 2012 period.

For the IPO scenario, we analyzed IPOs since March 2010, taking the pre-money value of those companies, from which we subtracted cash and debt to derive an implied enterprise value. The derived enterprise value was adjusted to reflect the additional cash necessary to reach an expected liquidity date, which was advanced to March 2013. For the trade sale scenarios, we estimated our enterprise value by analyzing M&A transactions involving certain life science and biotechnology companies over the period from April 2009 to June 2012, which we considered broadly comparable to our company. The projected enterprise values were adjusted to reflect the additional cash necessary to reach the expected liquidity date of September 2015, which corresponded with the then-expected availability of the Phase 3 clinical trial results.

We applied a discount of 30% to reflect the lack of marketability of our common stock. We then probability-weighted the discounted values per share under each scenario and summed the resulting weighted values to determine the fair value, per share, of our common stock.

September 30, 2012 Valuation

We conducted a valuation of our common stock as of September 30, 2012. The September 2012 valuation utilized the PWERM to allocate the enterprise value to the common stock. For the September 2012 valuation, significant assumptions for the PWERM included the probability of occurrence of each scenario, discount for the lack of marketability, timing to the liquidity event and discount rate. The key valuation assumptions included those noted in the following table:

	IPO Short Term	Trade Sale High	Trade Sale Low	Sales Below Liquidation Preference
Probability of scenario	20%	15%	20%	45%
Discount for marketability	30%	30%	30%	30%
Timeline to liquidity (in years)	0.75	3.25	3.25	3.25
Discount rate—common stock	35%	35%	35%	35%

The resulting estimated fair value of our common stock as of September 30, 2012 was $33.21 per share, a decrease of $2.46 from the prior June 2012 valuation.

For the IPO scenario, we analyzed IPOs since March 2010, taking the pre-money value of those companies, from which we subtracted cash and debt to derive an implied enterprise value. The derived enterprise value was adjusted to reflect the additional cash necessary to reach an expected liquidity date, which was advanced to June 2013. For the trade sale scenarios, we estimated our enterprise value by analyzing M&A transactions involving certain life science and biotechnology companies over the period from April 2009 to September 2012, which we considered broadly comparable to our company. The projected enterprise values were adjusted to reflect the additional cash necessary to reach the expected liquidity date of December 2015, which corresponded with the then-expected availability of the Phase 3 clinical trial results.

We applied a discount of 30% to reflect the lack of marketability of our common stock. We then probability-weighted the discounted values per share, under each scenario, and summed the resulting weighted values per share to determine the fair value per share of our common stock.

May 9, 2013 Valuation

We obtained a valuation of our common stock as of May 9, 2013, corresponding to the date of the offer of exchange, as described below. The May 2013 valuation utilized the PWERM approach to allocate the enterprise value to the common stock. For the May 2013 valuation, significant assumptions included the probability of occurrence of each scenario, timing to the liquidity event, discount rate and discount for lack of marketability. The key valuation assumptions included those noted in the following table:

	IPO Short Term	Trade Sale High	Trade Sale Low	Sales Below Liquidation Preference
Probability of scenario	30%	20%	20%	30%
Discount for marketability	20%	30%	30%	30%
Timeline to liquidity (in years)	0.90	3.14	3.14	3.14
Discount rate—common stock	35%	35%	35%	35%

The resulting estimated fair value of our common stock as of May 9, 2013 was $6.15 per share, an increase of $3.69 per share from the March 2013 valuation. This increase resulted from an increase in the probability assigned to an IPO from 5% in the March 2013 valuation to 30% in the May 2013 valuation. In connection with the increase in the IPO scenario, we projected a corresponding decreased probability from 65% to 30% in the sale below liquidation preference. This decrease reflected a higher likelihood of a successful strategic transaction outcome.

For the IPO scenario, we analyzed IPOs since March 2010, taking the pre-money value of those companies, from which we subtracted cash and debt to derive an implied enterprise value. The derived enterprise value was adjusted to reflect the additional cash necessary to reach an expected liquidity date, which was advanced to March 2014. For the trade sale scenarios, we estimated our enterprise value by analyzing M&A transactions involving certain life science and biotechnology companies over the period from April 2009 to May 2013, which we considered broadly comparable to our company. The projected enterprise values were adjusted to reflect the additional cash necessary to reach the expected liquidity date of June 2016, which corresponded with the then-expected availability of the Phase 3 clinical trial results.

We applied a discount of 20% and 30% for lack of marketability in the IPO and sale scenarios, respectively, to reflect the lack of marketability of our common stock. We then probability weighted the discounted values per share under each scenario and summed the resulting weighted values to determine the fair value per share of our common stock.

Stock Option Grants

The dates of our contemporaneous valuations have not always coincided with the dates of our stock-based compensation grants. In determining the exercise prices of the options set forth in the table below, our board of directors considered, among other things, the most recent valuations of our common stock and our assessment of additional objective and subjective factors it believed were relevant as of the grant date. The additional factors considered when determining any changes in fair value between the most recent contemporaneous valuation and the grant dates included, when available, the prices paid in recent transactions involving our

equity securities, as well as our stage of development, our operating and financial performance and current business conditions. Our board of directors intended all options granted to be exercisable at a price per share equal to the per share fair value of our common stock underlying those options on the date of grant.

The following table summarizes stock options granted from January 1, 2012 through August 28, 2014:

	Number of Common Shares Underlying Options Granted	Exercise Price Per Common Share	Reassessed Deemed Fair Value Per Common Share	Intrinsic Value Per Common Share at Grant Date
March 27, 2012	9,183	$ 38.13	$ 38.13	$ —
May 9, 2013	552,007	$ 2.46	$ 6.15	$ 3.69(1)
October 8, 2013	159,947	$ 14.76	$ 14.76	$ —
January 23, 2014	107,854	$ 16.85	$ 16.85	$ —
February 4, 2014	108,263	$ 16.85	$ 16.85	$ —
February 25, 2014	14,242	$0.00123	$ 16.85	$ 16.85(2)
July 31, 2014	488	$ 5.05	$ 5.05	$ —

(1) The fair value of our common stock was reassessed for financial reporting purposes subsequent to the grant date. We used the reassessed deemed fair value per common share of $6.15 in determining the stock-based compensation for financial statement purposes.
(2) This option was granted to a consultant and will be re-measured at fair value until vested.

The intrinsic value of all outstanding options as of June 30, 2014 was $6.5 million based on the estimated fair value of our common stock of $14.00 per share, the midpoint of the estimated price range set forth on the cover page of this prospectus, of which approximately $3.6 million related to vested options and approximately $2.9 million related to unvested options.

March 2012. Our board of directors granted options to purchase common stock on March 27, 2012, with each option having an exercise price of $38.13 per share. In establishing this exercise price, our board of directors considered input from management, including the contemporaneous valuation of our common stock which was performed on March 31, 2012, as well as the objective and subjective factors discussed above, including:

- the rights, preferences and privileges of our convertible preferred stock as compared to those of our common stock, including the liquidation preferences of our convertible preferred stock;
- the continued lack of liquidity of our common stock as a private company;
- the absence of any capital raising transactions during this period; and
- the impact of significant expenses associated with research and development and ongoing clinical trials.

Our board of directors determined that, at the grant date, the collective effect of these events and circumstances did not indicate a significant change in the fair value of our common stock. Based on these factors, our board of directors determined that the fair value of our common stock on March 27, 2012 was $38.13 per share.

May 2013. In connection with the closing of the Series B-1 financing, our board of directors granted options to purchase common stock on May 9, 2013 with an exercise price of $2.46 per share to eight employees. These shares were granted in connection with an offer of

exchange with existing option holders, in which a total of 8,154 unvested options with exercise prices ranging from $17.22 to $38.13 were exchanged for an aggregate of 545,868 options priced at $2.46. In making this offer of exchange, all unvested shares of employees' options were canceled by our board of directors. In establishing this exercise price, our board of directors considered input from management, including the valuation of our common stock at $2.46 per share as of March 31, 2013.

Based on these factors, our board of directors determined that the fair value of our common stock at May 9, 2013 was $2.46 per share.

Subsequently, our board of directors conducted a valuation of the fair value of our common stock at the time of the May 2013 option grants for financial reporting purposes. We obtained a third-party valuation provider to assist our board of directors in reassessing the fair value of our common stock as of this date. In performing this valuation, we used PWERM to allocate the estimated enterprise value to our common stock and relied on the assumptions described above, which included, among others, a thirty percent (30%) probability of a short-term IPO and a 0.90-year time to liquidity for a short-term IPO. The changes in the assumptions used for the May 2013 valuation, as compared to the March 2013 valuation, reflect the acceleration of our progress towards an IPO. As a result of the retrospective valuation of our common stock as of the grant date, our board of directors determined that the fair value of our common stock as of May 9, 2013 was $6.15 per share and this value has been applied retrospectively to the grants made as of May 9, 2013. In establishing this value, our board of directors considered input from management, as well as the following objective and subjective factors:

- capital market conditions for biotechnology companies continued to improve as evidenced by a recent increase in the number of IPOs and their valuations, including increased valuations;
- an increase in the NASDAQ Biotechnology Index of 9% from April 1, 2013 to May 9, 2013;
- an increase in the likelihood of our board of directors pursuing an IPO; and
- a decrease in the time to a prospective liquidity event.

As a result of the incremental value, the stock-based compensation expense associated with the offer of exchange grants, including the unrecognized compensation cost related to the canceled awards, was approximately $2.8 million, of which we recognized $0.7 million on the grant date, and the balance will be recognized over the future service period.

October 2013. Our board of directors granted options to purchase common stock on October 8, 2013, with an exercise price of $14.76 per share. In establishing this exercise price, our board of directors considered input from management, including the valuation of our common stock at $14.76 per share as of September 30, 2013, as well as the objective and subjective factors described above, including:

- capital market conditions for biotechnology companies continued to improve as evidenced by a recent increase in the number of IPOs and their valuations;
- an increase in the NASDAQ Biotechnology index of 17% from July 1, 2013 to September 30, 2013;
- an increase in the likelihood of our board of directors pursuing an IPO; and
- a decrease in the time to a prospective liquidity event.

Based on these factors, our board of directors determined that the fair value of our common stock at October 8, 2013 was $14.76 per share.

January and February 2014. Our board of directors granted options to purchase common stock on January 23 and February 4, 2014 with an exercise price of $16.85 per share. In establishing this exercise price, our board of directors considered input from management and determined that there had been no significant changes to the assumptions utilized in the December 2013 valuation. Our board of directors concluded that the valuation of our common stock had not changed since the December 2013 valuation and that the fair value of our common stock at January 23 and February 4, 2014 was $16.85 per share.

Our board of directors also granted a consultant an option to purchase 14,242 shares of common stock on February 25, 2014 with an exercise price of $0.00123 per share. In establishing the exercise price, our board of directors reviewed the overall compensation package for the services to be performed by the consultant. The options have an intrinsic value of $16.85 per share at the date of grant and contain performance- and time-based vesting conditions. The option will be re-measured at fair value each reporting period until the award vests, with changes in the fair value being recorded as stock based compensation expense within research and development expense in our consolidated statement of operations and comprehensive loss.

July 2014. Our board of directors granted options to purchase common stock on July 31, 2014 with an exercise price of $5.05 per share. In establishing this exercise price, our board of directors considered input from management and determined that there had been no significant changes to the assumptions utilized in the June 2014 valuation. Our board of directors concluded that the valuation of our common stock had not changed since the June 2014 valuation and that the fair value of our common stock at July 31, 2014 was $5.05.

Results of Operations

Comparison of the Six Months Ended June 30, 2013 and 2014:

(in thousands)	Six Months Ended June 30,		Increase (Decrease)	
	2013	2014	$	%
	(unaudited)			
Operating expenses:				
Research and development	$ 1,304	$ 7,011	$ 5,707	438%
General and administrative	2,104	3,296	1,192	57%
Total operating expenses	3,408	10,307	6,899	202%
Other (expense) income:				
Interest (expense) income, net	(596)	5	601	101%
Change in fair value of common stock warrant liability	(586)	1,794	2,380	406%
Change in fair value of convertible preferred stock warrant liability	128	—	(128)	(100)%
Change in fair value of tranche liability	(618)	—	618	100%
Other income (expense), net	130	—	(130)	(100)%
Total other (expense) income	(1,542)	1,799	3,341	217%
Net loss	$ (4,950)	$ (8,508)	$ 3,558	72%

Research and Development

For the six months ended June 30, 2014, our total research and development expenses increased $5.7 million, or 438%, to $7.0 million from $1.3 million for the comparable period in the prior year. The increase in research and development expenses was primarily due to $0.5 million in start-up activities related to the Phase 3 clinical trial of entinostat, the achievement of a $2.0 million development milestone under the license agreement with Bayer Pharma AG (formerly known as Bayer Schering Pharma AG), or Bayer, and increased employee compensation costs of $0.9 million related to increased headcount, salary increases for existing headcount, recruiting costs and stock-based compensation expense. The increase in research and development expense was also related to the decision to suspend the planned ENCORE 305 Phase 2 clinical trial of entinostat, including $0.7 in close-down costs and $0.6 million in write-down of inventory.

Research and development expenses consisted of the following:

(in thousands)	Six Months Ended June 30,		Increase (Decrease)	
	2013	2014	$	%
	(unaudited)			
External research and development expenses	$ 627	$ 5,339	$ 4,712	752%
Internal research and development expenses	677	1,672	995	147%
Total research and development expenses	$ 1,304	$ 7,011	$ 5,707	438%

General and Administrative

For the six months ended June 30, 2014, our total general and administrative expenses increased $1.2 million, or 57%, to $3.3 million from $2.1 million for the comparable period in the prior year. The increase in general and administrative expenses was primarily driven by an increase in legal and consulting costs of $0.8 million incurred in connection with preparing for our IPO and an increase of $0.1 million in employee compensation. The employee compensation costs related to increased headcount and salary increases for existing headcount, as well as recruiting costs and stock-based compensation expense.

Interest (Expense) Income, net

For the six months ended June 30, 2014, interest income, net, increased $0.6 million to $6,000 from $0.6 million of interest expense, net, in the comparable period in the prior year primarily as a result of the conversion of our convertible notes into convertible preferred stock in March 2013.

Change in Fair Value of Common and Convertible Preferred Stock Warrant Liability

At each period end, the fair value of the outstanding common and preferred stock warrant liabilities is re-measured; and the change in the fair value is recorded in other income (expense), net, in the statement of operations and comprehensive loss. The increase of $2.4 million in the change in fair value of common stock warrant liability for the six months ended June 30, 2014, compared to the six months ended June 30, 2013, was primarily due to change in the fair value of the Bayer common stock warrant liability. In addition, in March 2013, in conjunction with our recapitalization, the warrants to purchase common and convertible preferred stock issued to investors and note holders were canceled and de-recognized on the date of cancellation. The decrease of $0.1 million in the change in the fair value of the convertible preferred stock warrant

liability for the six months ended June 30, 2014, compared to the six months ended June 30, 2013, was primarily due to the cancellation of the warrants in conjunction with our recapitalization.

Change in Fair Value of Tranche Liability

For the six months ended June 30, 2013, we recognized a change in fair value of the tranche liability of $0.6 million as a result of the fair value re-measurement on a mark-to-market basis during the period. As the tranche liability was associated with the Series B-1 financing, which occurred in 2013, there were no charges recorded during the comparable 2014 six-month period.

Comparison of the Years Ended December 31, 2012 and 2013:

(in thousands)	Years Ended December 31, 2012	2013	Increase (Decrease) $	%
Operating expenses:				
Research and development	$ 5,240	$ 3,208	$ (2,032)	(39)%
General and administrative	3,494	5,363	1,869	53%
Total operating expenses	8,734	8,571	(163)	(2)%
Other income (expense):				
Interest expense, net	(4,673)	(771)	(3,902)	(84)%
Change in fair value of common stock warrant liability	(431)	(1,943)	1,512	351%
Change in fair value of convertible preferred stock warrant liability	669	128	(541)	(81)%
Change in fair value of tranche liability	—	(3,144)	3,144	100%
Change in fair value of embedded derivative	3,205	—	(3,205)	(100)%
Other (expense) income, net	(1)	130	131	NM
Total other (expense) income	(1,231)	(5,600)	4,369	355%
Net loss	$ (9,965)	$ (14,171)	$ 4,206	42%

Research and Development

For the year ended December 31, 2013, our total research and development expenses decreased $2.0 million, or 39%, to $3.2 million from $5.2 million in the prior year. This decrease in research and development expenses was primarily driven by decreases in our external research and development costs due to the completion of our company-sponsored Phase 2 clinical programs and clinical pharmacology trials and related activities during 2012.

Research and development expenses consisted of the following:

(in thousands)	Years Ended December 31, 2012	2013	Change $	%
External research and development expenses	$ 3,228	$ 1,489	$ (1,739)	(54)%
Internal research and development expenses	2,012	1,719	(293)	(15)%
Total research and development expenses	$ 5,240	$ 3,208	$ (2,032)	(39)%

General and Administrative

For the year ended December 31, 2013, our total general and administrative expenses increased $1.9 million, or 53%, to $5.4 million from $3.5 million in the prior year. The increase in our general and administrative expenses was driven by an increases in employee compensation, primarily related to stock-based awards of $1.0 million and the $0.7 million related to the modification of stock options that occurred in May 2013 in connection with the offer of exchange, and $0.8 million of professional fees related to business development and consultant costs incurred in connection with preparing for this offering.

Interest Expense, net

For the year ended December 31, 2013, our interest expense decreased $3.9 million, or 84%, to $0.8 million from $4.7 million in the prior year. The decrease in interest expense primarily resulted from the conversion of our convertible notes into convertible preferred stock in March 2013.

Change in Fair Value of Common and Convertible Preferred Stock Warrant Liabilities

As of December 31, 2012 and 2013, we had recorded liabilities of $5.7 million and $2.5 million, respectively, related to warrants to purchase common stock and convertible preferred stock. At each reporting period end, we re-measured the fair value of the outstanding warrants and recorded the change in the fair value of the warrant liabilities in other income (expense), net, in the statement of operations and comprehensive loss.

In March 2013, in conjunction with our recapitalization, the warrants to purchase common and convertible preferred stock issued to investors and note holders were canceled and de-recognized on the date of the cancellation. For the note holders that were considered related parties, this offset was recorded as an increase in additional paid-in-capital, and for the warrants held by non-related parties upon cancellation of their warrants, we recorded a gain on extinguishment of $0.1 million in other income (expense), net, in the statement of operations and comprehensive loss. The remaining expense is primarily related to the change in fair value of the Bayer common stock warrant liability of $1.9 million.

Change in Fair Value of Embedded Derivative

For the year ended December 31, 2012, the value of the embedded derivative declined by $3.2 million as the probability of a change in control declined from an estimated 50% as of December 31, 2011 to 5% as of September 30, 2012. In March 2013, in connection with the conversion of our convertible notes into convertible preferred stock, the fair value of the embedded derivative was de-recognized against equity, as the note holders were related parties. Accordingly, we recognized no change for the year ended December 31, 2013.

Change in Fair Value of Tranche Liability

For the year ended December 31, 2013, we recognized a change in fair value of the tranche liability of $3.1 million as a result of the fair value re-measurement on a mark-to-market basis during the period. As the tranche liability was associated with the Series B-1 financing, which occurred in 2013, there were no charges recorded during the comparable prior year period.

Liquidity and Capital Resources

Since our inception and through June 30, 2014, we have raised an aggregate of $93.3 million to fund our operations from the sale of convertible preferred stock and convertible

debt securities. As of June 30, 2014, our cash and cash equivalents were $4.7 million. We have incurred losses and cumulative negative cash flows from operations since our inception in October 2005; and as of June 30, 2014, we had an accumulated deficit of $146.5 million. We anticipate that we will continue to incur significant losses for at least the next several years. We expect that our research and development and general and administrative expenses will continue to increase; and as a result, we will need additional capital to fund our operations, which we may raise through a combination of the sale of equity, debt financings, or other sources, including potential collaborations. As discussed below in the section entitled “Indebtedness,” in June 2014, we entered into a loan and security agreement for a $15.0 million senior secured term loan facility.

Indebtedness

In March 2011, we entered into a $6.0 million senior secured term loan facility with General Electric Capital Corporation, or GE. The loan was secured by all of our tangible property and intellectual property. An initial term loan was funded on the closing date of the facility in the aggregate principal amount of $3.0 million and a second term loan of $3.0 million was funded in September 2011. The initial term loan had a term of 42 months and the second term loan had a term of 36 months, with both loans due on September 29, 2014. Interest accrued based on the three-year treasury rate in effect three business days prior to the funding date of each applicable term loan, plus 8.75% per annum, which equaled 10.01% for the tranche borrowed on March 29, 2011 and 9.75% for the tranche borrowed on September 29, 2011.

In March and May 2013, we entered into an agreement with GE to modify the existing loan agreement to allow for interest-only payments for the period of March 1 through May 31, 2013. In June 2013, the agreement was further amended to extend the interest-only period through July 15, 2013 in exchange for a commitment by us to accelerate the repayment of the loan. Under the terms of the commitment, we paid $2.0 million of the outstanding loan balance in July 2013 in connection with the third tranche of the Series B-1 financing along with principal payments of $0.9 million through September 30, 2013, leaving $1.5 million outstanding. On November 21, 2013, we paid the remaining balance in connection with a fourth tranche closing of the Series B-1 financing. As of December 31, 2013, we had no amounts outstanding under this loan facility.

In June 2014, we entered into a loan and security agreement with Solar Capital Ltd., or Solar, as collateral agent and lender, consisting of a $15.0 million senior secured term loan facility. The loan is secured by substantially all of our existing and after-acquired assets except our intellectual property, but including right of payment with respect to any such intellectual property and all proceeds from the disposition of any such intellectual property. Our intellectual property is subject to a negative pledge. At our request and upon the meeting of certain conditions, including the completion of this offering on or before September 30, 2014, an initial term loan in the aggregate principal amount of $5.0 million will be funded within 10 business days after the completion of this offering. If we do not borrow the initial term loan within 10 business days after the completion of this offering, we are required to pay a non-use fee of $100,000. If the initial term loan is funded, at our request, a second term loan of up to $10.0 million may be funded in two $5.0 million increments on or prior to June 30, 2015. The term loan facility has a maturity date of 48 months after the effective date. Interest will accrue at a floating rate per annum equal to LIBOR plus 8.8%, payable monthly in arrears. In connection with the term loan facility, we paid a closing fee of $150,000 and other transactional and legal costs of $120,000. Upon the completion of this offering, we will be required to pay a $150,000 success fee that will be due on the earlier of the maturity date of the term loan facility or upon the occurrence of certain change of control or liquidity events. In addition, we are required to

pay a final fee equal to 4% of the amount of term loans funded that will be due on the earlier of the maturity date of the term loan facility or upon the occurrence of certain change of control or liquidity events.

As of August 28, 2014, we had no amounts outstanding under this term loan facility. In the event we raise in this offering less than the expected net proceeds set forth in the section entitled “Use of Proceeds,” based on the midpoint of the price range set forth on the cover page of this prospectus and assuming no exercise of the over-allotment option by the underwriters, we intend to borrow against the term loan facility to cover the difference between our actual net proceeds and our expected net proceeds. This borrowing, together with the net proceeds from this offering, will fund our projected operating expenses and capital expenditure requirements through mid-2017.

Plan of Operations and Future Funding Requirements

Our primary uses of capital are, and we expect will continue to be, compensation and related expenses, third-party clinical research and development services, clinical costs, legal and other regulatory expenses and general overhead costs. We believe that the net proceeds from this offering, together with our existing cash and cash equivalents, and the amounts available for borrowing under the term loan facility with Solar, will fund our projected operating expenses and capital expenditure requirements through mid-2017.

At that point we expect to have PFS data in the Phase 3 clinical trial and, if the PFS primary endpoint is met, to file a New Drug Application with the FDA. However, we will need to raise additional capital to fund our operations after mid-2017. If we do not receive PFS data from our Phase 3 clinical trial within the time frame we expect or if the data from this trial fail to demonstrate PFS improvement, we may be unable to raise additional capital on acceptable terms, or at all. In addition, we have based our estimates on assumptions that may prove to be incorrect, and we could use our capital resources sooner than we currently expect. Additionally, the process of testing drug candidates in clinical trials is costly, and the timing of progress in these trials is uncertain. We cannot estimate the actual amounts necessary to successfully complete the development and commercialization of our drug candidate or whether, or when, we may achieve profitability. Our future capital requirements will depend on many factors, including:

- the progress, timing and results of the pivotal Phase 3 clinical trial in HR-positive advanced breast cancer;
- the progress, timing and results of the planned Phase 1b clinical trial of entinostat as an immunomodulatory agent;
- the determination of whether to proceed with Phase 2 clinical trials in HR-positive advanced breast cancer and NSCLC;
- the costs, timing and outcome of regulatory review of entinostat and any other drug candidates that we may develop and any additional clinical trials required for such regulatory review;
- the costs and timing of future commercialization activities, including product manufacturing, marketing, sales and distribution, for any of our drug candidates for which we receive marketing approval;
- the revenue, if any, received from commercial sales of our drug candidates for which we receive marketing approval, if any;
- the costs and timing of preparing, filing and prosecuting patent applications, maintaining and enforcing our intellectual property rights and defending any intellectual property-related claims; and

- the extent to which we acquire or in-license other products and technologies or license our drug candidate in one or more regional geographies.

Until such time, if ever, as we can generate substantial product revenues, we expect to finance our cash needs through a combination of equity offerings, debt financings and additional funding from license and collaboration arrangements. Except for any obligations of our collaborators to reimburse us for research and development expenses or to make milestone payments under our agreements with them, we will not have any committed external source of liquidity.

To the extent that we raise additional capital through the future sale of equity or debt, the ownership interest of our stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect the rights of our existing common stockholders. If we raise additional funds through collaboration arrangements in the future, we may have to relinquish valuable rights to our technologies, future revenue streams or drug candidates or grant licenses on terms that may not be favorable to us. If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or future commercialization efforts or grant rights to develop and market drug candidates that we would otherwise prefer to develop and market ourselves.

Cash Flows

The following is a summary of cash flows:

(in thousands)	Years Ended December 31, 2012	Years Ended December 31, 2013	Six Months Ended June 30, 2013	Six Months Ended June 30, 2014
			(unaudited)	
Net cash used in operating activities	$ (9,284)	$ (7,295)	$ (2,412)	$ (8,316)
Net cash provided by (used in) investing activities	494	(4,027)	33	3,988
Net cash provided by (used in) financing activities	5,709	20,889	2,539	(1,096)
Net (decrease) increase in cash and cash equivalents	$ (3,081)	$ 9,567	$ 160	$ (5,424)

Net Cash Used in Operating Activities

Net cash used in operating activities for the six months ended June 30, 2013 was $2.4 million compared to $8.3 million used for the six months ended June 30, 2014. The increase in cash used in operating activities for the six months ended June 30, 2014 of $5.9 million was primarily due to an increase in our net loss of $6.3 million (adjusted for non-cash items), an increase in short-term deposits of $0.3 million and a decrease in accounts payable of $0.3 million slightly offset by an increase in accrued expenses of $0.7 million and a decrease in prepaid expenses and other assets of $0.2 million. Our net loss for the six months ended June 30, 2013, adjusted for non-cash items such as stock-based compensation, change in fair value of embedded derivative, change in fair value of tranche liability, change in fair value of warrants and amortization of debt discount was $3.0 million, compared to $9.3 million for the six months ended June 30, 2014. The higher loss for the six months ended June 30, 2014 was attributable to increased research and development expenses due to the start-up activities

related to the Phase 3 clinical trial of $0.5 million, the $2.0 million development milestone, $1.3 million of costs related to the suspension of the planned ENCORE 305 Phase 2 clinical trial of entinostat, and increased general and administrative expenses incurred in connection with preparing for our IPO.

Net cash used in operating activities for the year ended December 31, 2012 was $9.3 million compared to $7.3 million for year ended December 31, 2013. The decrease was primarily due to a decrease in our net loss adjusted for non-cash items slightly offset by a decrease in accrued expenses and other liabilities that was partially offset by an increase in prepaid expenses and other assets and a decrease in accounts payable. Our net loss for the year ended December 31, 2012, adjusted for non-cash items such as stock-based compensation, noncash research and development expense, change in fair value of embedded derivative, change in fair value of tranche liability, change in fair value of warrants and amortization of debt discount was $10.1 million, compared to $7.3 million for the year ended December 31, 2013. The lower net loss for the year ended December 31, 2013 is attributable to lower external research and development costs due to the completion of our company-sponsored Phase 2 clinical programs and clinical pharmacology trials and related activities during 2012 and lower employee cash compensation and travel costs incurred due to a reduction in headcount.

Net Cash Provided by Investing Activities

Net cash provided by investing activities for the six months ended June 30, 2013 was $33,000 compared to $4.0 million for the six months ended June 30, 2014. The increase in cash provided by investing activities of $4.0 million for the six months ended June 30, 2014 was primarily due to the proceeds from sales and maturities of short-term investments, net of purchases, which did not occur during the comparable period in the prior year.

Net cash provided by investing activities was $0.5 million for the year ended December 31, 2012 compared to net cash used of $4.0 million for the year ended December 31, 2013. The increase in the cash used by investing activities was primarily due to the purchase of short-term investments during the 2013 period, which did not occur during the 2012 period.

Net Cash Provided by Financing Activities

Net cash provided by financing activities for the six months ended June 30, 2013 was $2.5 million compared to $1.1 million used in financing activities for the six months ended June 30, 2014. During the six months ended June 30, 2013, we received $2.3 million from the issuance of convertible preferred stock, net of issuance costs, and $0.7 million from the issuance of debt, partially offset by $0.4 million of term loan repayments. During the six months ended June 30, 2014, we paid $1.1 million of deferred issuance costs related to our IPO.

Net cash provided by financing activities was $5.7 million during the year ended December 31, 2012, as compared to $20.9 million during the year ended December 31, 2013. During the year ended December 31, 2012, cash provided by financing activities included $7.5 million from the issuance of debt net of issuance costs, partially offset by $1.8 million of term loan repayments. During the year ended December 31, 2013, we received $25.6 million from the issuance of convertible preferred stock, net of issuance costs, and $0.7 million from the issuance of debt, partially offset by $4.4 million of term loan repayments.

Contractual Obligations and Contingent Liabilities

The following summarizes our significant contractual obligations as of December 31, 2013:

(in thousands)	Total	Less than 1 Year	1 to 3 Years	3 to 5 Years	More than 5 Years
Operating lease for office space[1]	$358	$ 86	$241	$ 31	$ —
Capital lease for office equipment[2]	17	3	7	7	—
	$375	$ 89	$248	$ 38	$ —

(1) In December 2013, we entered into a 40-month non-cancelable operating lease for office space in Waltham, Massachusetts that expires on April 10, 2017.
(2) In December 2013, we entered into a 60-month non-cancelable lease for office equipment, which is accounted for as a capital lease. The leased asset is included in property, plant and equipment, at cost.

There have been no significant changes to the contractual obligations table above since December 31, 2013. The contractual obligations table does not include any potential contingent payments upon the achievement by us of specified patent prosecution, clinical, regulatory and commercial events, as applicable, or royalty payments we may be required to make under license agreements we have entered into with various entities pursuant to which we have in-licensed certain intellectual property, including the Bayer license agreement. See “Business—Intellectual Property—In-Licensed Intellectual Property” for additional information. The table also excludes potential payments we may be required to make under manufacturing agreements as the timing of when these payments will actually be made is uncertain and the payments are contingent upon the initiation and completion of future activities. In June 2014, we achieved a research and development milestone, and in accordance with the terms of the Bayer license agreement, we recorded $2.0 million of research and development expense that we are obligated to pay during the second half of 2014.

In March 2014, we entered into a clinical trial agreement with Eastern Cooperative Oncology Group, a contracting entity for ECOG-ACRIN, that describes the parties’ obligations with respect to the NCI-sponsored pivotal Phase 3 clinical trial of entinostat. We will provide a fixed level of financial support for the clinical trial through an upfront payment of $695,000 and a series of time- and milestone-based payments of up to $970,000, and we are obligated to supply entinostat and placebo to ECOG-ACRIN for use in the clinical trial. Our aggregate payment obligations are approximately $19.4 million over an estimated period of approximately seven years.

Net Operating Loss and Research and Development Tax Credit Carryforwards

At December 31, 2013, we had federal and state tax net operating loss carryforwards of $26.8 million and $21.8 million, respectively. The federal and state net operating loss carryforwards expire beginning in 2014 and ending in 2033. At December 31, 2013, we had available income tax credits of $1.3 million, which are available to reduce future income taxes, if any. These income tax credits begin to expire in 2020.

Utilization of the net operating losses and credits may be subject to a substantial annual limitation due to ownership change limitations provided by the Internal Revenue Code of 1986, as amended. The annual limitation may result in the expiration of our net operating losses and credits before we can use them. We have recorded a valuation allowance on all of our deferred tax assets, including our deferred tax assets related to our net operating loss and research and development tax credit carryforwards.

Off-Balance Sheet Arrangements

We did not have during the periods presented, and we do not currently have, any off-balance sheet arrangements, as defined in the rules and regulations of the SEC.

Internal Control Over Financial Reporting

In preparing our consolidated financial statements as of and for the year ended December 31, 2013, we and our independent registered public accounting firm identified control deficiencies in the design and operation of our internal control over financial reporting that together constituted a material weakness in our internal control over financial reporting. A material weakness is a deficiency, or a combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our financial statements will not be prevented or detected on a timely basis. The material weakness identified resulted from the fact that we do not have sufficient financial reporting and accounting staff with appropriate training in GAAP and SEC rules and regulations. As such, our controls over financial reporting were not designed or operating effectively, and as a result, there were adjustments required in connection with closing our books and records and preparing our December 31, 2012 and 2013 consolidated financial statements.

The material weakness in our internal control over financial reporting was attributable to our lack of sufficient financial reporting and accounting personnel with the technical expertise to appropriately account for complex, non-routine transactions. In response to this material weakness, we plan to hire additional personnel with public company financial reporting expertise to build our financial management and reporting infrastructure and further develop and document our accounting policies and financial reporting procedures. However, we cannot assure you that we will be successful in pursuing these measures or that these measures will significantly improve or remediate the material weakness described above. We also cannot assure you that we have identified all of our existing material weaknesses or that we will not in the future have additional material weaknesses. We have not yet remediated our material weakness, and the remediation measures that we intend to implement may be insufficient to address our existing material weakness or to identify or prevent additional material weaknesses.

Neither we nor our independent registered public accounting firm has performed an evaluation of our internal control over financial reporting during any period in accordance with the provisions of the Sarbanes-Oxley Act. In light of the control deficiencies and the resulting material weakness that was identified as a result of the limited procedures performed, we believe that it is possible that had we and our independent registered public accounting firm performed an evaluation of our internal control over financial reporting in accordance with the provisions of the Sarbanes-Oxley Act, additional material weaknesses and significant control deficiencies may have been identified. However, for as long as we remain an “emerging growth company” as defined in the JOBS Act, we intend to take advantage of the exemption permitting us not to comply with the requirement that our independent registered public accounting firm provide an attestation on the effectiveness of our internal control over financial reporting. See “Summary—Implications of Being an Emerging Growth Company.”

JOBS Act

In April 2012, the Jumpstart Our Business Startups Act of 2012, or the JOBS Act, was enacted. Section 107 of the JOBS Act provides that an emerging growth company can take advantage of an extended transition period for complying with new or revised accounting

standards. Thus, an emerging growth company can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We have irrevocably elected not to avail ourselves of this extended transition period, and, as a result, we will adopt new or revised accounting standards on the relevant dates on which adoption of such standards is required for other public companies.

Quantitative and Qualitative Disclosures about Market Risk

The market risk inherent in our financial instruments and in our financial position represents the potential loss arising from adverse changes in interest rates. As of June 30, 2014, we had cash equivalents of $4.7 million, consisting of interest-bearing money market accounts. Our primary exposure to market risk is interest rate sensitivity, which is affected by changes in the general level of U.S. interest rates. Due to the short-term maturities of our cash equivalents, an immediate 100 basis point change in interest rates would not have a material effect on the fair market value of our cash equivalents.

We do not believe that inflation and changing prices had a significant impact on our results of operations for any periods presented herein.

BUSINESS

Overview

We are a late-stage biopharmaceutical company focused on the development and commercialization of our lead product candidate, entinostat, an epigenetic therapy for treatment-resistant cancers. In September 2013, entinostat was granted Breakthrough Therapy designation by the U.S. Food and Drug Administration, or FDA, based on data from our completed randomized Phase 2b clinical trial in estrogen receptor positive, or ER+, locally recurrent or metastatic breast cancer. This trial showed statistically significant improvement in the primary endpoint of progression-free survival, or PFS, and showed statistically significant improvement in overall survival, an exploratory endpoint.

We and our collaborators at the National Cancer Institute, or NCI, will evaluate entinostat in a pivotal Phase 3 clinical trial in hormone receptor, HR, positive locally advanced or metastatic breast cancer, which we refer to as advanced breast cancer. The Phase 3 clinical trial will be conducted by the Eastern Cooperative Oncology Group– American College of Radiology Imaging Network Cancer Research Group, or ECOG-ACRIN, under sponsorship and funding support from the NCI. We are supporting the Phase 3 clinical trial under a Cooperative Research and Development Agreement, or CRADA, with the NCI and a separate agreement with ECOG-ACRIN. The protocol for the Phase 3 clinical trial was reviewed and agreed upon by the FDA under a Special Protocol Assessment, or SPA, agreement with the NCI in January 2014. ECOG-ACRIN activated the trial in March 2014 with PFS data expected in mid-2017.

To develop entinostat for use as an immunomodulatory agent, we currently plan to conduct a Phase 1b clinical trial to examine the combination of entinostat with antibodies targeting programmed cell death protein 1, or PD1, or programmed cell death ligand 1, or PDL1, to characterize the safety, define a recommended Phase 2 dose and assess the preliminary clinical activity of this combination. In addition, we also plan to evaluate entinostat with other hormone therapies in breast cancer and with other immune therapies in lung and renal cancers. Additional investigator- and NCI-sponsored trials are being conducted to provide Phase 2 proof-of-concept data for entinostat in metastatic lung cancer and other solid and hematologic cancers.

To further enhance our breast cancer program, we plan to conduct a Phase 2 clinical trial to further study the association between a potential biomarker of entinostat activity and clinical outcome, which we identified in our previous trial. We would require additional financial resources beyond what we expect to have following this offering in order to initiate this trial, and we may not be able to obtain such additional funds.

Entinostat is an oral, weekly or bi-weekly, selective histone deacetylase, or HDAC, inhibitor that has been well-tolerated in clinical trials to date. HDACs are a class of enzymes with a predominant role in regulating gene expression through a chemical modification to DNA-associated proteins known as histones. This chemical modification is part of a regulatory system that controls gene expression, known as epigenetics. When the function of these epigenetic enzymes is altered, gene expression is changed in ways that often leads to disease. For example, specific HDACs are over-expressed in cancer cells, leading to improper gene regulation, which results in uncontrolled cell growth and resistance to cancer therapies. We believe that based upon our preclinical results entinostat is a potent inhibitor of these cancer-relevant HDACs, thereby restoring normal gene expression and protein function to slow cancer growth and turn off activated cancer therapy resistance pathways. We believe entinostat is differentiated through its selectivity for cancer-relevant HDACs and clinical activity profile, including convenient oral dosing and long half-life.

Entinostat targets cancer cell growth and the primary and acquired resistance pathways that limit the effectiveness and durability of cancer therapies. We observed in clinical trials that entinostat, in combination with other cancer therapies, may enhance and extend their therapeutic benefit resulting in prolonged PFS and overall survival. We believe that our approach with entinostat is applicable to a broad range of cancer therapies and across a wide spectrum of tumor types. We have collected clinical data in both advanced breast and lung cancer, which we believe supports this approach and demonstrates the significant clinical and commercial potential for entinostat in targeting resistance to cancer therapies.

Entinostat in Breast Cancer

Our primary strategy with entinostat is aimed at treating HR-positive breast cancer patients in combination with hormone therapy. HR-positive breast cancer refers to cases in which the estrogen receptor, or ER, or progesterone receptor, or PR, is expressed alone or in combination with each other. This type of breast cancer represents approximately 70% of all breast cancer cases. We are initially focused on the treatment of men and postmenopausal women with advanced breast cancer who have progressed after standard of care hormonal agents. Despite advances in the diagnosis and treatment of these patients, most will progress with an expected survival of approximately 18 to 24 months. We believe that our strategy to overcome resistance to hormonal agents with entinostat may improve outcomes for breast cancer patients.

Building on the statistically significant results shown in the Phase 2b clinical trial, we have the following two trials planned, which combine entinostat with approved therapies in our target patient populations in advanced breast cancer:

- ***E2112: HR-positive Advanced Breast Cancer—Pivotal Registration Trial*.** This pivotal Phase 3 clinical trial is designed to be a double-blind, placebo-controlled, trial of exemestane with or without entinostat in 600 HR-positive men and postmenopausal women with hormone refractory, advanced breast cancer. We and ECOG-ACRIN have designed the trial to have two primary endpoints of PFS and overall survival. We expect that either endpoint may serve as the basis for submitting a New Drug Application, or NDA, if data are positive. The trial will be conducted by ECOG-ACRIN under sponsorship and funding support from the NCI. We are supporting the Phase 3 clinical trial under a CRADA with the NCI and a separate agreement with ECOG-ACRIN. The protocol for the Phase 3 clinical trial was reviewed and agreed upon by the FDA under a SPA agreement with the NCI in January 2014. A SPA agreement is a written agreement on the design and size of clinical trials intended to form the primary basis of a claim of effectiveness in an NDA from the FDA. ECOG-ACRIN activated the trial in March 2014 with PFS data expected in mid-2017.
- ***ENCORE 305: HR-positive Advanced Breast Cancer—Biomarker and Efficacy Trial*.** This Phase 2 clinical trial is designed as a randomized, double-blind, placebo-controlled, trial of fulvestrant with or without entinostat in postmenopausal women with HR-positive locally advanced breast cancer. The trial is intended to further study the association between a potential biomarker of entinostat activity and clinical outcome identified in our completed Phase 2b clinical trial. In addition, we expect the trial to inform us as to whether the clinical benefit observed in combination with exemestane in the Phase 2b clinical trial can be extended to a second hormone therapy, fulvestrant. We have suspended work on this Phase 2 clinical trial, and we would require additional financial resources beyond what we expect to have following this offering in order to initiate this trial, and we may not be able to obtain such additional funds.

In addition, clinical investigators are further evaluating entinostat combinations in two additional breast cancer patient populations: human epidermal growth factor receptor 2, or HER2, positive patients; and triple-negative breast cancer, or TNBC, patients. Those clinical trials include:

- ***NCI-8871: HER2-Positive Breast Cancer—Safety Trial***. This NCI-funded Phase 1 clinical trial is currently enrolling patients and is designed to test the safety of entinostat in combination with lapatinib and trastuzumab, both approved HER2-targeted therapies, in patients who have previously received trastuzumab for HER2-positive metastatic breast cancer. Enrollment into the trial is ongoing and data for this trial is expected in late 2014.
- ***GCC0927: TNBC—Exploratory Trial***. This planned investigator-sponsored Phase 2 clinical trial in newly diagnosed TNBC patients is designed to test the ability of entinostat in combination with hormone therapy to induce ER expression in TNBC tumors and thereby potentially shrink the tumors prior to surgery. Data for this trial is expected in early 2016.

Entinostat in Lung Cancer

Our second program with entinostat combinations is focused on the treatment of patients with metastatic non-small cell lung cancer, or NSCLC, through the targeting of epigenetically based resistance to cancer therapies. Lung cancer typically presents late in its clinical course with over half of patients diagnosed with metastatic disease with poor therapeutic response and survival rates. According to the American Cancer Society, the five-year survival rate for patients with metastatic NSCLC is only approximately 1%. Our strategy in metastatic NSCLC is aimed at improving the overall survival of patients.

In a completed Phase 2 clinical trial, our collaborators at Johns Hopkins University under sponsorship of the NCI, conducted a single-arm, two-stage, open-label clinical trial of the combination of entinostat and azacitidine in patients with metastatic NSCLC. All of these patients had been heavily pre-treated with a median of three prior regimens for metastatic disease and had shown no meaningful response to such treatment. Although this population was heavily pre-treated, patients given the combination of entinostat and azacitidine achieved objective responses, including a complete response, a partial response with complete resolution of multiple liver metastases, and several patients with durable stable disease. Our collaborators also noted that patients receiving therapy after progressing on entinostat and azacitidine had a higher than expected objective response rate to subsequent therapies. Most striking was that all five patients that received an immune therapy such as nivolumab as their next therapy, derived clinical benefit, three with partial responses and two with durable stable disease. Accordingly, based on these findings and on emerging preclinical data demonstrating synergistic combined anti-tumor effects of entinostat and immune therapy, we plan to initiate a series of clinical studies in combination with targeted immune therapies. Two ongoing clinical trials, NCI-9253 (165 patients) and J1353 (120 patients), are designed to provide proof-of-concept data in late 2015 to support the role of entinostat and azacitidine in enhancing the activity of subsequent chemotherapy (NCI-9253) or immune therapy (J1353).

We conducted a randomized, double-blind, placebo-controlled, Phase 2b clinical trial in NSCLC of entinostat in combination with erlotinib compared to erlotinib plus placebo, which we refer to as ENCORE 401. Erlotinib is an approved epidermal growth factor receptor, or EGFR, inhibitor targeted therapy. EGFR exists on the cell surface and is activated by binding to its growth factors. This activation by several growth factors ultimately leads to processes which are involved in cancer development, invasion and metastasis. Mutations that lead to EGFR overexpression or overactivity have been associated with a number of cancers, including lung cancer. HDAC inhibitors, such as entinostat, may influence the activity of EGFR, and thus interfere with the growth of the tumor or its ability to invade and spread. These HDAC inhibitors

may also modulate EGFR and thus influence the efficacy of lung cancer drugs that work by recognizing EGFR or its mutations. Although the clinical trial did not meet its primary endpoint of PFS rate at four months using a predefined, retrospective analysis, we identified a subset of patients that had extended overall survival with entinostat combined with erlotinib versus erlotinib alone. These patients expressed high levels of epithelial cadherin, or E-cadherin, a biomarker of epithelial lung cancers in their tumor samples.

Clinical Development Programs of Entinostat

The following table sets forth the primary clinical trials using entinostat in breast cancer, lung cancer and in other indications:

Breast Cancer	Preclinical	Phase 1	Phase 2	Phase 3	Sponsor	Data Expected
E2112: HR-positive Pivotal Phase 3 Registration (combo with exemestane)					NCI[1]/Syndax	Mid-2017
NCI-8871: HER2-positive (combo with lapatinib and trastuzumab)					NCI[2]	Late 2014
GCC0927: TNBC (combo with hormone therapy)					University of Maryland[3]	Early 2016
NSCLC	**Preclinical**	**Phase 1**	**Phase 2**	**Phase 3**	**Sponsor**	**Data Expected**
NCI-9253: Epigenetic Priming to Chemotherapy (combo with azacitidine)					NCI[4]	Late 2015
J1353: Epigenetic Priming to Immunotherapy (combo with azacitidine)					Johns Hopkins[5]	Late 2015
Other Indications	**Preclinical**	**Phase 1**	**Phase 2**	**Phase 3**	**Sponsor**	**Data Expected**
Immunotherapies (combo with anti-PD1 antibodies)					Syndax	Planned mid-2016
Solid Tumor: Renal cell; other NSCLC					NCI[2][4]	2014-2017
Hematological Malignancies: AML; ALL					NCI[2]/Johns Hopkins[6]	2014-2015

(1) Conducted pursuant to an Investigational New Drug, or IND, application, which was filed by the NCI on October 24, 2013.
(2) Conducted pursuant to an IND application, which was filed with the FDA by the NCI on November 6, 2000.
(3) Conducted pursuant to an IND application, which was filed with the FDA by the University of Maryland on March 7, 2014.
(4) Conducted pursuant to an IND application, which was filed with the FDA by the NCI on February 28, 2013.
(5) Conducted pursuant to an IND application, which was filed with the FDA by Johns Hopkins University on April 22, 2013.
(6) Conducted pursuant to an IND application, which was filed with the FDA by Johns Hopkins University on September 30, 2010.

Our Strategy

Our goal is to develop and commercialize entinostat as an effective treatment to target resistance to cancer therapies in breast cancer, lung cancer and other indications. The core elements of our business strategy are to:

- ***Obtain regulatory approval for entinostat in combination with hormone therapy in advanced breast cancer.*** Under sponsorship and funding support from the NCI, ECOG-ACRIN plans to conduct a 600 patient Phase 3 clinical trial testing exemestane plus entinostat, which we refer to as EE, versus exemestane plus placebo, which we refer to as EP, in HR-positive men and postmenopausal women with hormone refractory, advanced breast cancer. We are supporting the Phase 3 clinical trial under a CRADA with the NCI and a separate agreement with ECOG-ACRIN. ECOG-ACRIN activated the trial in

March 2014 with PFS data expected in mid-2017. The protocol for the Phase 3 clinical trial was reviewed and agreed upon by the FDA under a SPA agreement with the NCI in January 2014. We believe that the submission of the results of the Phase 3 clinical trial, if successful, would be sufficient for regulatory approval of entinostat in the U.S. as a treatment for HR-positive men and postmenopausal women with advanced breast cancer who have progressed following their most recent non-steroidal aromatase inhibitor treatment.

- ***Develop entinostat for use as an immunomodulatory agent***. Preclinical studies have indicated that entinostat inhibits the activity of host immune cells that function to suppress the activity of anti-tumor immune responses. Based on these findings and a recently published study, we are currently planning a Phase 1b clinical trial to examine the combination of entinostat with antibodies targeting PD1 to characterize the safety, define a recommended Phase 2 dose and assess the preliminary clinical activity of this combination. We anticipate initiating this trial in early 2015 with safety, recommended Phase 2 dose, preliminary activity and correlative data available in mid-2016.
- ***Expand the clinical and commercial breadth of entinostat in breast cancer, lung cancer and other indications.*** We believe that there are many opportunities for expanding the indications in which entinostat may target epigenetic and immunologic mechanisms of resistance to therapies. We and our collaborators currently have eleven studies, consisting of nine ongoing and two planned, that are designed to provide clinical proof-of-concept for promising opportunities that we have identified in breast cancer, lung cancer and other indications. These studies do not require additional financial support from us and are being or will be conducted through our NCI collaboration with additional support from the *Stand Up To Cancer* funding initiative. Data from these studies are expected beginning in the second half of 2015. In addition, we also plan to evaluate entinostat with other hormone therapies in breast cancer and with other immune therapies in lung and renal cancers.
- ***Capitalize on our identification of potential biomarkers for entinostat.*** Cancer is a diverse disease that in some cases may be characterized by specific molecular, genetic and epigenetic changes that drive tumor growth in patients. Identification of biomarkers may predict which of these changes in patients can be targeted by specific cancer therapies, such as entinostat. This provides an opportunity to maximize clinical effectiveness in the target patient population while minimizing needless exposure in those not predicted to respond. In our completed Phase 2b clinical trials in breast and lung cancer, we identified potential biomarkers for subsets of patients that experienced improved clinical outcomes with entinostat when compared to patients in the control arm. For our breast cancer and NSCLC indications, we plan to conduct randomized Phase 2 clinical trials in the future to further study the patient biomarker enrichment strategy. These trials would require additional financial resources beyond what we expect to have following the offering.

Entinostat

Entinostat is an oral HDAC inhibitor of the benzamide chemical class of compounds. HDACs are a type of epigenetic enzyme that modify histones, which are key protein components of the chromatin structure around which DNA is coiled in the nucleus. They also modify a variety of non-histone proteins that control cell survival, proliferation, angiogenesis and immunity. Eighteen human HDACs have been identified, which are generally subdivided into four classes

based on sequence and functional homology or similarity. In cancer cells, HDAC activity is abnormally elevated leading to silencing of those genes important for normal cell growth and activation of those genes that drive cancer cell growth. Based on these effects, HDACs have become attractive targets for cancer therapy. At present, two HDAC inhibitors, vorinostat and romidepsin, have been granted full approval by the FDA for the treatment of patients with relapsed cutaneous T-cell lymphoma. In addition, romidepsin has been granted accelerated approval for refractory peripheral T-cell lymphoma.

In preclinical studies, entinostat has inhibited the activity of Class 1 HDACs, which are believed to be the most important HDACs in control of tumor cell proliferation, cell cycle control and DNA damage repair. In addition, entinostat has exhibited a wide range of anti-tumor activity, alone or in combination with other therapies. Specifically, entinostat is synergistic with aromatase inhibitors, anti-estrogens and epidermal growth factor receptor, or EGFR, inhibitors, supporting the rationale for its further investigation in breast and lung cancer.

We believe that certain features of entinostat provide a differentiated clinical activity profile from other HDAC inhibitors. Such features include:

- a longer half-life, which means that each dose of entinostat can act for a longer time on the cancer cells, minimizing the frequency of dosing and potentially reducing the severity and frequency of adverse events, or AEs;
- oral delivery, allowing for more convenient dosing;
- selectivity for specific cancer relevant Class 1 HDAC enzymes; and
- a mechanism of action that inhibits multiple drivers of cancer growth.

Entinostat in Breast Cancer

Overview

Breast cancer is the leading cause of cancer death in women worldwide, and the second leading cause of cancer death in women in the United States after lung cancer. According to the American Cancer Society, in 2013, an estimated 232,340 new cases of invasive breast cancer will be diagnosed in the United States. Although the five-year survival rate for women diagnosed with non-metastatic breast cancer is over 85%, the five-year survival rate for women diagnosed with metastatic breast cancer is only 24%, indicating the need for new therapies that can prolong overall survival.

Breast cancers can be divided into three subsets based on the presence or absence in the tumor of the following protein receptors:

- HR-positive, which means expressing the ER or PR alone or in combination with each other;
- HER2-positive, which means expressing the HER2 receptor; and
- triple negative, which means not expressing ER, PR or HER2.

These subsets can be further defined by the stage of the disease. Early-stage breast cancer is diagnosed before the cancer has spread beyond the breast and regional or local lymph nodes. Locally advanced breast cancer has spread to the chest wall or skin of the breast and axillary or mammary lymph nodes. Metastatic cancer has spread to other organs of the body.

Our entinostat development program targets advanced breast cancer in each of these subsets, with our lead program focused on the approximately 70% of patients with HR-positive and HER2-negative breast cancer.

Treatment options for breast cancer are guided by the size, stage, rate of growth and other characteristics of the tumor, including the tumor subtype. According to the NCI, there are six types of standard treatment for breast cancer. These are surgery, sentinel lymph node biopsy followed by surgery, radiation therapy, targeted therapy, hormone therapy and combinations of conventional systemic chemotherapy. For breast cancer that is diagnosed early and before the cancer has spread beyond the breast and regional lymph nodes, treatment is generally curative and may involve surgery followed by adjuvant therapy. Adjuvant therapy is aimed at increasing the chances for a cure after surgery and is determined by the breast cancer subtype and includes the corresponding systemic hormone therapy, targeted therapy or chemotherapy. In contrast, advanced breast cancer has a poor prognosis and is typically incurable. The treatment goal for advanced breast cancer is to prolong disease PFS and overall survival and provide relief of symptoms.

Current Treatment of HR-positive Advanced Breast Cancers

Current treatment of HR-positive advanced breast cancer usually includes multiple courses of hormone therapy until chemotherapy becomes the primary option. There are three types of commonly used hormone therapies that inhibit estrogen stimulation of HR-positive advanced breast cancers. These are tamoxifen, a selective ER modulator, fulvestrant, a selective ER downregulator, and aromatase inhibitors, such as anastrozole, letrozole and exemestane, which interfere with estrogen production. Exemestane, a steroidal aromatase inhibitor, is typically used as a second- or third-line treatment upon progression from first-line treatment with the non-steroidal aromatase inhibitors anastrozole and letrozole.

In 2012, approximately 42,000 patients in the United States with HR-positive advanced breast cancer were treated with hormone therapies with the goal to prolong overall survival and to delay treatment with more toxic chemotherapies. Due to limited efficacy of hormone therapies in the advanced setting, multiple lines of treatment are typically used, with each additional line of hormone therapy resulting in a shorter PFS and lower overall survival. The median overall survival for advanced breast cancer in the first- and second-line setting is approximately three to four years and two years, respectively. In 2012, approximately 19,700 patients were treated with a first-line hormone therapy and approximately 22,400 patients with a hormone therapy as second- or third-line treatment. Researchers have demonstrated that the diminished clinical benefit of each hormone therapy is due to primary and acquired resistance to hormone therapy. The cause of resistance is multi-factorial and results in tumor progression independent of estrogen stimulation.

Current Treatment of Other Breast Cancer Subtypes

Current treatment of HER2-positive advanced breast cancer includes treatment with monoclonal antibodies, such as trastuzumab, pertuzumab, ado-trastuzumab emtansine or small molecule inhibitors. Although these treatments can be effective in blocking the tumor growth caused by the HER2 receptor by binding to it, primary and acquired resistance limit their clinical benefit.

TNBC tends to be more aggressive and invasive than other breast cancers. Patients with TNBC generally have a poorer prognosis and lower overall survival rate than patients with breast cancers that are ER+ and PR-positive. Due to a lack of ER, PR and HER2 expression, TNBC

cannot be treated effectively with targeted therapies and are therefore typically treated with chemotherapy.

Clinical Development of Entinostat in Advanced Breast Cancer

Efficacy and Safety Endpoints in Clinical Trials

There are a number of standard efficacy endpoints that clinicians use to measure outcomes for clinical trials for cancer therapies. The following are explanations of the meanings of the various efficacy endpoints that we have used and plan to use in our clinical trials. Each is determined in accordance with Response Criteria in Solid Tumors, or RECIST, measurement guidelines.

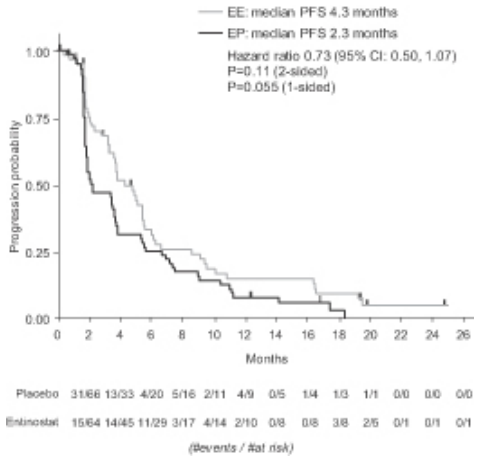
- Overall survival: the time interval from the initiation of treatment to the patient's death.
- PFS: the time interval from the initiation of treatment to the time the patient's disease worsens or the patient dies.
- Objective response rate: the percentage of patients in the trial whose cancer measurement improves (i.e., patients with best overall tumor response of partial or complete response).
- Complete response, or CR: disappearance of all cancerous tumors that were present at the initiation of treatment.
- Partial response, or PR: cancer improves with a decrease of at least 30% in the overall mass of measurable tumors.
- Stable disease, or SD: measured cancer mass does not worsen (i.e., neither sufficient decrease in overall tumor mass to qualify as partial response nor sufficient increase in overall tumor mass to qualify as disease progression).
- Clinical benefit rate: the percentage of patients in the trial who achieve best overall tumor response of stable disease or partial or complete response.
- Disease progression: patients' cancer worsens with an increase of at least 20% in the overall mass of measurable tumors, the appearance of new tumor(s) or the worsening of non-measurable tumors since beginning of treatment.
- Best overall response: the best tumor response for a patient that is recorded from the beginning of treatment.
- P-value: a statistical measure that represents the probability that the difference that is observed between two treatment arms is due to random chance and is not actually related to the treatments being compared. For example, p-value of 0.1 indicates there is a 10% chance the difference that is observed between the treatment arms is due to random chance.
- Confidence interval, or CI: a statistical measure that indicates a range which is believed to include the true effect parameter with some level of confidence. For example, a 95% CI is the range at which one is 95% sure, with a 5% chance of being wrong, that the range given includes the true effect parameter.
- Hazard ratio: represents the chance of events occurring in the treatment arm relative to the chance of events occurring in the control arm. A hazard ratio of one means that there is no difference in survival between the two groups. A hazard ratio of greater than one or less than one means that survival was better in one of the groups.

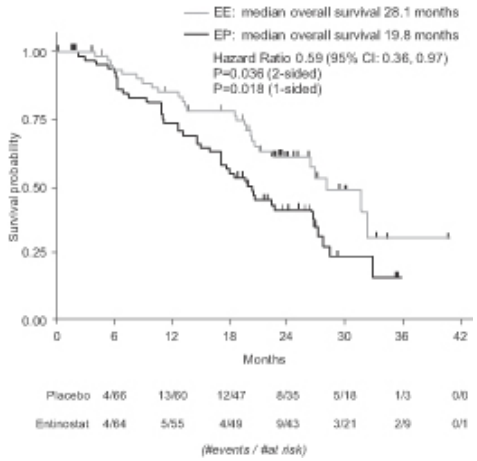
- AE Grade: refers to the severity of an a graded measure of safety assessed using the NCI's Common Terminology Criteria for Adverse Events—Version 3.0, with Grade 1 being least severe and Grade 5 being death.

ENCORE 301: Completed Phase 2b Clinical Trial

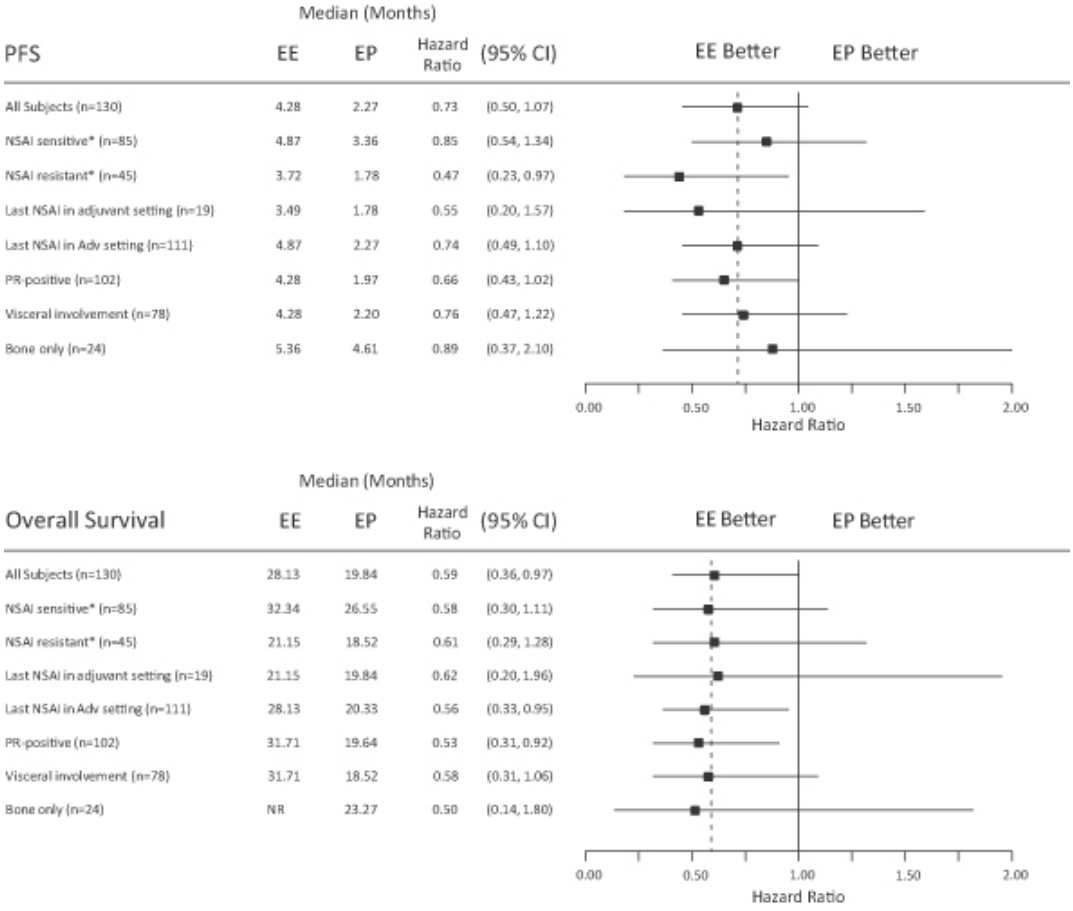
Overview. We conducted a randomized, placebo-controlled Phase 2b clinical trial to test our hypothesis that combining entinostat with exemestane in ER+ advanced breast cancer could overcome hormone therapy resistance, thereby sensitizing cells to anti-estrogen therapy. In our trial, of the 130 postmenopausal patients with ER+ advanced breast cancer progressing on a non-steroidal aromatase inhibitor, 64 patients were randomly assigned to exemestane (25 mg daily) plus entinostat (5 mg once per week) and 66 patients were randomly assigned to exemestane (25 mg daily) plus placebo. The primary endpoint was PFS, with overall survival as an exploratory endpoint. We collected blood samples from a subset of patients in order to evaluate whether a protein lysine acetylation, a biomarker of entinostat activity, could be predictive of clinical outcome. The trial met the statistical criteria for a positive PFS endpoint using a pre-specified p-value of 0.10 from a one-sided test for statistical significance. The overall survival benefit observed in the EE group was also statistically significant versus the EP group. The results are summarized below along with the Kaplan-Meier plot for PFS and overall survival. A Kaplan-Meier plot is a graphical statistical method commonly used to describe survival characteristics.

- Median PFS approximately doubled to 4.3 months in the EE group versus 2.3 months in the EP group, corresponding to a statistically significant hazard ratio of 0.73; 95% CI, 0.50 to 1.07; P2-sided=0.11; P1-sided=0.055.
- Median overall survival improved to 28.1 months in the EE group versus 19.8 months in the EP group, corresponding to a statistically significant hazard ratio of 0.59; 95% CI, 0.36 to 0.97; P2-sided=0.036; P1-sided=0.018.
- The protein lysine acetylation biomarker was associated with an improved clinical benefit with prolonged PFS of 8.6 months in the subset of EE treated patients from whom blood was taken.
- Fatigue and neutropenia were the most frequent Grade 3 and Grade 4 toxicities.





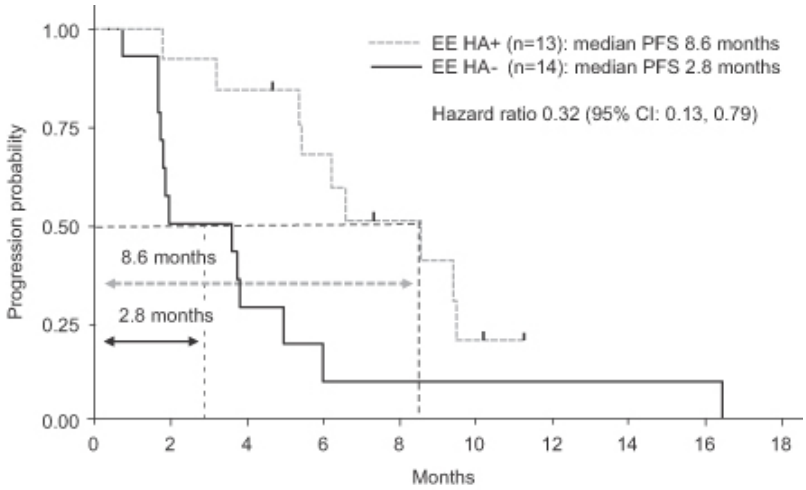
We have utilized forest plots, which are a form of graphical display designed to illustrate the relative strength of treatment effects across multiple subgroups, to highlight the consistency of the clinical benefit of EE treatment across multiple subgroups for both the PFS and overall survival endpoints. In addition, we analyzed the post-study treatments that patients received to determine whether there were imbalances in the subsequent treatment that could account for the difference in overall survival observed between the EE and EP groups. The two groups were well-balanced for the first and all subsequent cancer therapies, which suggest that a favorable result for overall survival is unlikely due to differences in the therapies patients received after discontinuing study treatment.



AI - aromatase inhibitor
NSAI - non-steroidal AI
Notes:

- Visceral involvement refers to advanced breast cancer that has spread to any of the internal organs in the body.
- NSAI sensitive indicates a CR, PR or SD greater than six months on prior non-steroidal aromatase inhibitor therapy; all other patients considered NSAI resistant.

Exploratory Biomarker Analysis. HDAC enzymes mediate deacetylation, which is the removal of chemical modifications called acetyl groups from amino acids called lysines. Inhibition of HDACs with entinostat results in acetylation, or the addition of acetyl groups to lysines. We hypothesized that hyperacetylation, or increased acetylation in circulating blood cells in response to entinostat, could serve as a surrogate biomarker of entinostat clinical benefit. The results in 27 EE-treated patients, highlighted in the Kaplan-Meier plot below, indicated that following entinostat treatment at day 15, hyperacetylation (HA+) was associated with a prolonged median PFS of 8.6 months versus 2.8 months for non-hyperacetylation (HA-). We plan to further explore these findings in the randomized Phase 2 clinical trial. We would require additional financial resources beyond what we expect to have following this offering in order to initiate this trial, and we may not be able to obtain such additional funds.



Clinical Safety Data. Safety was assessed by utilizing the NCI's Common Terminology Criteria for Adverse Events—Version 3. When entinostat was added to exemestane, the AE profile was consistent with previous clinical experience with entinostat treatment. Overall, the EE group had a higher rate of AEs versus the EP group at 95% and 85%, respectively, with the most common AEs in the EE group being fatigue, gastrointestinal disturbances, such as nausea, vomiting and diarrhea, and hematologic toxicities, such as uncomplicated neutropenia, thrombocytopenia and anemia. The EE group had more AEs leading to dose modification (35% versus 6%), and more AEs leading to study discontinuation (11% versus 2%), irrespective of study drug relationship.

For hematological toxicities, thrombocytopenia was managed by dose modification during entinostat treatment, with all cases being non-severe and none requiring drug discontinuation. In approximately half of the patients who experienced [3] Grade 3 neutropenia, it was managed by dose modification, with only one case leading to entinostat discontinuation. Additional reasons leading to EE discontinuation included two patients owing to nausea and vomiting and one patient each owing to weakness in extremities, hypoxia/radiation pneumonitis, fatigue and mucositis.

The incidence of serious AEs was similar between the EE and EP groups at 16% and 12%, respectively, with four EE patients each experiencing a Grade 4 AE, including fatigue, leucopenia, neutropenia and hypercalcemia. One fatal AE occurred in each treatment arm with the EE event considered related to disease progression. We did not observe significant cardiovascular effects in this trial, which have been reported with other HDAC inhibitors.

Trial Summary. Findings from the Phase 2b clinical trial in patients who have progressed on a non-steroidal aromatase inhibitor demonstrate that the combination of entinostat plus exemestane resulted in a statistically significant improvement in PFS, the primary endpoint of the trial. PFS was prolonged by two months reducing the risk of disease progression by 27% relative to exemestane alone (hazard ratio 0.73; 95% CI 0.50, 1.07; p=0.055). This ability to prolong the duration of effective aromatase inhibitor therapy and delay the initiation of chemotherapy is an important goal for the treatment of breast cancer.

Importantly, at the median duration of follow-up of 25 months, a statistically significant median overall survival with EE of 28.1 months was observed, compared to a 19.8 months median survival with patients in the EP treatment arm (hazard ratio 0.59; 95% CI 0.36, 0.97; p=0.018). While these data need to be confirmed in a larger Phase 3 clinical trial, sensitivity and data analysis did not reveal any difference in baseline characteristics or post-entinostat treatment imbalance that may have contributed to the survival difference. The overall survival benefit may be explained by long-term effects of entinostat on tumor phenotype, cancer stem cell or progenitor cell pool, and sensitization to subsequent post-study treatments.

Based on statistically significant Phase 2b clinical trial data showing improvement in PFS and overall survival, we believe that a randomized Phase 3 clinical trial is warranted to confirm these clinically meaningful observations.

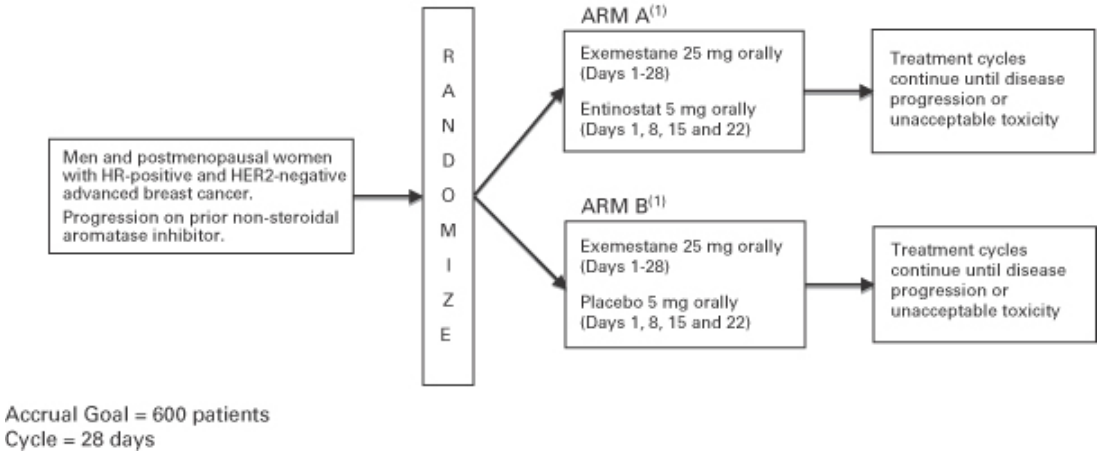
Development Plan of Entinostat in Breast Cancer

E2112: Pivotal Phase 3 Clinical Trial

We have developed with ECOG-ACRIN the Phase 3 clinical trial to confirm the PFS and overall survival benefits observed in the Phase 2b clinical trial, which will be conducted by ECOG-ACRIN under sponsorship and funding support from the NCI. We are supporting the Phase 3 clinical trial under a CRADA with the NCI and a separate agreement with ECOG-ACRIN. The trial is designed to be a randomized, double-blind, placebo-controlled trial of entinostat in combination with exemestane compared to exemestane plus placebo. The protocol for the Phase 3 clinical trial was reviewed and agreed upon by the FDA under a SPA agreement with the NCI in January 2014. ECOG-ACRIN activated the trial in March 2014. The trial initiated enrollment of approximately 600 patients across the cooperative group network of up to 800 sites worldwide in the second quarter of 2014. We anticipate that the trial will require approximately 40 months to fully enroll patients with primary PFS endpoint data expected in mid-2017.

The primary objective of the trial is to evaluate whether the addition of entinostat to exemestane improves either PFS or overall survival in HR-positive men and postmenopausal women with HER2-negative, advanced breast cancer who have previously progressed on a non-steroidal aromatase inhibitor. The NCI and ECOG-ACRIN, in collaboration with us, have designed the trial to have two primary endpoints of PFS and overall survival. We expect that either endpoint may serve as the basis for submitting an NDA, if data are positive. The Phase 3 clinical trial also contains secondary patient-reported outcomes, or PRO, endpoints to evaluate differences between arms in treatment toxicities, reduced symptom burden as an indicator of treatment response, and overall health-related quality of life. PRO measures are common in ECOG-ACRIN therapeutic trials due to the scientific aims of its Cancer Control & Outcomes Program, which seeks to increase understanding, from the patient perspective, about how novel therapies impact quality of life. Secondary objectives of the trial include assessments of safety, response rate, and changes in acetylation status in peripheral blood mononuclear cells, the potential biomarker identified in our Phase 2b clinical trial, as a predictor of clinical benefit. Additional exploratory objectives include evaluation of other potential biomarkers in tissue samples collected from patients.

Details of the trial design are provided below:



(1) Treatment is blinded.

The enrollment size of approximately 600 patients in the trial is adequate for achieving a statistically significant difference in median PFS with a p-value less than 0.002 and in median overall survival with a p-value less than 0.048 based on the trial supporting a hypothesized hazard ratio of 0.58 for PFS and 0.75 for overall survival. If the hypothesized hazard ratio for PFS is true, the PFS endpoint has an 88.5% chance of success. Similarly, if the hypothesized hazard ratio of overall survival is true, the overall survival endpoint has an 80% chance of success.

The primary analysis of PFS will be conducted when 247 PFS events occur out of the initial 360 patients enrolled. At the time of the primary PFS analysis, which we anticipate will occur in the second half of 2016, the first interim analysis of overall survival will also be conducted. Stopping rules based upon the interim analyses of overall survival have been outlined such that enrollment may terminate early if the statistical boundary for overall survival is met. Because of the smaller numbers of patients and limited length of follow-up at the time of the first interim analysis of overall survival, we do not expect to meet the criteria for early stopping at that time. In the absence of early stopping, the results of the primary analysis of PFS will be made available to us when all 600 patients have entered the trial, which is anticipated to be mid-2017. If the PFS endpoint is met, interim overall survival results will be released to us at that time as well. If the overall survival data demonstrate a positive trend, we expect they will be used to supplement an NDA submission based on meeting the primary PFS endpoint.

If the primary analysis of PFS fails to achieve statistical significance, a positive overall survival outcome at any interim analysis during the conduct of the trial will also be a potential approval pathway. ECOG-ACRIN will perform seven interim analyses of overall survival approximately every six months to assess the potential superiority of entinostat plus exemestane relative to placebo plus exemestane. The 410 deaths required for the primary analysis of overall survival takes into consideration any statistical impact of the various interim analyses on the analysis of the overall survival endpoint. If the interim analyses do not demonstrate a statistically significant overall survival benefit, ECOG-ACRIN will not release the results of such interim analyses to us.

The primary analysis of overall survival data represents another opportunity for submission of an NDA to the FDA for potential approval. The primary analysis of overall survival will occur

when 410 deaths from among the 600 patients enrolled have occurred. We expect this analysis to occur in the second half of 2019.

ENCORE 305: Phase 2 Clinical Trial

In our completed Phase 2b clinical trial, we demonstrated in a subset of patients that hyperacetylation may be a biomarker for identifying best responders to the combination of entinostat plus a hormone therapy. We designed a new Phase 2 clinical trial to replicate and further characterize hyperacetylation as a biomarker for clinical response. The trial will combine entinostat with fulvestrant to determine whether the clinical benefit observed in combination with exemestane can be extended to a second hormone therapy. We have suspended work on this Phase 2 clinical trial, and we would require additional financial resources beyond what we expect to have following this offering in order to initiate this trial, and we may not be able to obtain such additional funds.

Other Development Activities in Breast Cancer

In addition to our ongoing development program studying the combination of entinostat and exemestane for the treatment of advanced breast cancer, we have conducted a Phase 2 clinical trial to examine the combination of entinostat with aromatase inhibitors. We are also currently collaborating with the NCI and investigators on combination trials of entinostat with other therapies for HER2-positive breast cancer and TNBC. Each of these studies is being funded either by the NCI or as investigator-initiated studies funded through grants and sponsoring institutions.

- ***ENCORE 303: Completed Phase 2 Clinical Trial.*** We conducted an open-label, single-arm Phase 2 clinical trial of entinostat in combination with aromatase inhibitors in 27 patients with advanced breast cancer. Patients who were experiencing disease progression on their prescribed aromatase inhibitor were continued on the same aromatase inhibitor, but were also given entinostat to determine whether entinostat could halt or slow the disease progression and thus extend the benefit of the aromatase inhibitor. The trial provided early evidence of entinostat benefit and safety in combination with aromatase inhibitors. The addition of entinostat was well-tolerated and resulted in a clinical benefit rate of 15.4% with one partial response and three patients with stable disease lasting at least six months. The most frequent AEs considered by investigators to be entinostat-related include fatigue, nausea, diarrhea and lethargy.
- ***NCI-8871: HER2-Positive Breast Cancer—Safety Trial.*** We are collaborating with investigators at MD Anderson Cancer Center to determine whether the addition of entinostat to a second HER2 targeted therapy can overcome the resistance that had developed in response to prior HER2 targeted therapy. A Phase 1 dose escalation trial of entinostat with lapatinib, a small molecule dual inhibitor of HER2 and EGFR signaling has established the feasibility and safety of that combination. A second Phase 1 clinical trial is currently enrolling entinostat plus lapatinib combined with trastuzumab, a monoclonal antibody inhibitor of HER2 signaling. The primary objective of the Phase 1 portion of the trial is to determine the recommended Phase 2 dose for entinostat in combination with lapatinib and trastuzumab in patients who have previously received trastuzumab. We expect data from the Phase 1 clinical trial in late 2014.
- ***GCC0927: TNBC—Exploratory Trial.*** We are collaborating with investigators at University of Maryland to determine whether the combination of entinostat and anastrozole can overcome the inherent resistance of TNBC to hormone therapy. We have designed this trial based on studies in an animal model of TNBC in which entinostat was able to induce the expression of ER, and thus sensitize the previously ER-negative TNBC cells to hormone therapy treatment and block tumor growth. The

primary objectives of the trial are initially to evaluate the safety and tolerability of entinostat in combination with anastrozole in postmenopausal women, or in combination with tamoxifen in premenopausal women, and to determine the optimal dose of entinostat in combination with either hormone agent for further evaluation in a Phase 2 clinical trial. We expect data from the Phase 2 clinical trial in early 2016.

Additional Regulatory Trials in Advanced Breast Cancer

We intend to conduct required clinical pharmacology trials prior to submitting an NDA for entinostat in advanced breast cancer. These may include a Phase 1 clinical trial to determine whether entinostat interferes with exemestane pharmacological properties (drug-drug interaction trial) and a Phase 1 clinical trial to determine how much entinostat is absorbed by patients, how it is distributed in the body and how it is metabolized and excreted. We plan to conduct these trials in parallel with the pivotal Phase 3 clinical trial.

Entinostat in Lung Cancer

Overview

Lung cancer is the most common form of cancer worldwide and the most common cause of cancer-related deaths in both men and women. According to the American Cancer Society, in the United States there will be an estimated 228,190 new cases of lung cancer with an estimated 159,480 expected to die from the disease in 2013. The deaths from lung cancer account for approximately 27% of all cancer deaths in the United States.

Lung cancer is typically divided into two groups based upon the appearance of the tumor cells—NSCLC and small cell lung cancer, or SCLC. NSCLC accounts for approximately 85% to 90% of lung cancer cases. NSCLC can be further divided into three predominant subtypes—squamous cell, adenocarcinoma and large cell carcinoma. Over half of patients present with metastatic disease resulting in overall low survival rates. Our entinostat program focuses on combinations with existing therapies to treat metastatic NSCLC.

Current Treatment Options for Metastatic NSCLC

The poor prognosis for metastatic NSCLC in the majority of patients is reflected in the limited treatment options for the disease, which typically include a first-line combination chemotherapy followed by a choice of a second-line therapeutic approach such as erlotinib. Most patients receiving first-line chemotherapy will relapse within one year of treatment with a median PFS of approximately five to six months and median overall survival of approximately ten to twelve months. In the second-line setting, the median PFS is approximately three to four months and median overall survival approximately six to seven months. According to the American Cancer Society, the five-year survival rate for patients with metastatic NSCLC is only approximately 1%.

Recent discoveries have identified specific genetic changes that drive NSCLC growth. These changes have been targeted by newly available therapies that are highly effective in those patients with the specific targeted mutation. Examples of this approach include erlotinib, which targets a specific genetic change in the EGFR gene, and crizotinib, which targets a specific genetic change in the anaplastic lymphoma kinase, or ALK, gene. Compared to standard chemotherapy, these agents increase PFS to approximately ten months versus five months in the case of erlotinib and approximately eight months versus three months in the case of crizotinib. The genetic changes in these genes are rare and only occur for EGFR in 10% to 15% and for ALK in less than 5% of NSCLC patients in the United States, thereby limiting the impact

of these therapies in the broader NSCLC patient population. As a result, there is an unmet medical need for new therapies or combinations of therapies that extend the overall survival of patients with metastatic NSCLC.

Clinical Development of Entinostat in Lung Cancer

Our lung cancer program is focused on advancing two combination approaches shown in preclinical studies to inhibit lung cancer cell growth. The first approach combines entinostat with erlotinib, and the second approach combines entinostat with azacitidine, a DNA methyltransferase, or DNMT, inhibitor. We believe that successful treatment of NSCLC and introduction of novel therapeutic approaches will be dependent on the identification of biomarkers that allow patient selection for the optimization of response.

In preclinical studies, we have observed that combining entinostat with erlotinib enhances the effect of this EGFR inhibitor and can reverse or delay the development of resistance to the drug in tumor cells. Based on published results, this effect may be greater in patients with elevated levels of a cell surface marker called E-cadherin. Cadherins play an important role in cell adhesion and in the development of metastatic disease. Researchers have identified a positive association between E-cadherin expression on tumor tissue and response to erlotinib as a potential predictive marker of prognosis and response. Patients with elevated levels of E-cadherin represent approximately 40% of the overall NSCLC population. Consequently, the potential role of E-cadherin as a predictive test for the combination of entinostat and erlotinib has been investigated in clinical trials, including our lung cancer trial ENCORE 401.

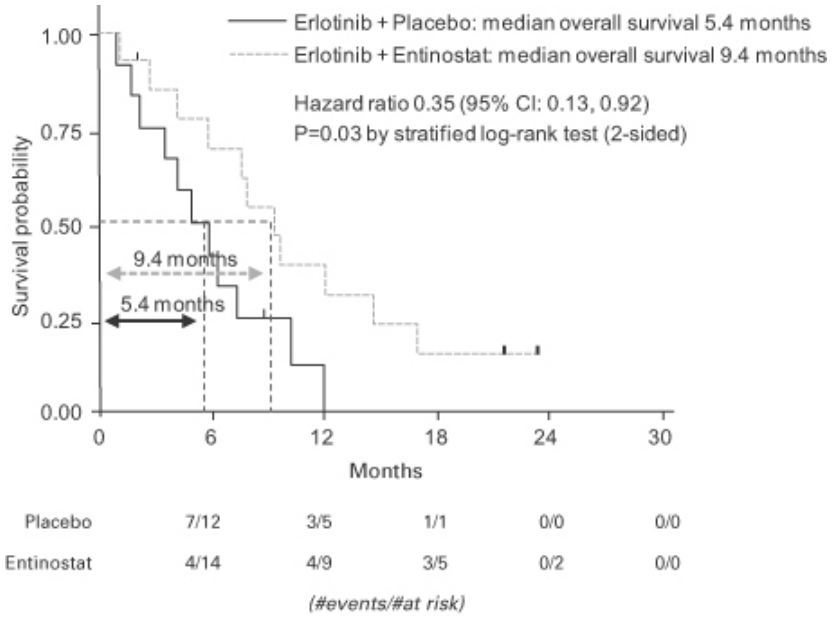
ENCORE 401: Completed Phase 2b Clinical Trial

We conducted a randomized, double-blind, placebo-controlled Phase 2b clinical trial of entinostat in combination with erlotinib compared to erlotinib plus placebo. The trial enrolled 132 patients with metastatic NSCLC who experienced disease progression after one or two prior regimens of therapy or within six months of completion of chemotherapy following surgery. Patients were randomized on a one-to-one basis and stratified according to the patients' smoking status. Patients in the trial received treatment with erlotinib in a 150 mg dose daily with entinostat or placebo in a 10 mg dose on days 1 and 15 of a 28-day cycle. Patients could receive up to six cycles of therapy, subject to discontinuation in the event of disease progression or unacceptable toxicity. Patients in the erlotinib plus placebo control arm whose disease progressed had the option of crossing over to the entinostat-erlotinib arm. Patients in the entinostat-erlotinib arm that did not progress after six cycles of therapy had the option of continuing therapy in an open-labeled extension of the protocol.

The primary endpoint of the trial was PFS rate at four months. Secondary endpoints were PFS rate at six months and best overall response. In the trial, we also evaluated as exploratory endpoints overall PFS, overall survival and biomarkers, including E-cadherin protein expression. These endpoints were analyzed for the overall trial population and for subgroups of patients defined by baseline expression levels for biomarkers of response, such as E-cadherin expression.

In the overall trial population, there were no statistically significant differences in the primary or secondary endpoints of the trial. However, in a subset of 26 patients with elevated levels of E-cadherin, we observed a median overall survival of 9.4 months in the entinostat-erlotinib arm compared to 5.4 months in the erlotinib plus placebo arm. In addition, the median PFS was 3.7 months in the entinostat-erlotinib arm compared to 1.9 months in the

erlotinib plus placebo arm. The overall survival data in the subset of patients with elevated levels of E-cadherin are shown in the following Kaplan-Meier plot:



In the clinical trial combining entinostat and erlotinib, the most frequent AEs were fatigue, rash, shortness of breath, low circulating phosphorous levels, and buildup of fluid between the layers of tissue that line the lungs and chest cavity.

As a follow up to the Phase 2b clinical trial and to further study the E-cadherin patient biomarker enrichment strategy, we have planned a randomized, Phase 2 clinical trial of 200 NSCLC patients selected prior to randomization based on expression of high levels of the E-cadherin biomarker in their tumor. We would require additional financial resources beyond what we expect to have following this offering in order to support the costs of such a confirmatory Phase 2 clinical trial, and we may not be able to obtain such additional funds.

NCI-7759: Phase 2 Clinical Trial

Preclinical studies in lung cancer models have indicated that a dual epigenetic therapy approach of combining entinostat with azacitidine resulted in a greater inhibition of cancer cell growth than either agent alone. Based on these findings, investigators at Johns Hopkins University and the NCI conducted a clinical trial of the combination of entinostat and azacitidine in patients with metastatic NSCLC. The trial was conducted in two parts with the Phase 1 portion establishing the safety of the combination in 10 patients and the Phase 2 portion evaluating the efficacy as well as safety in an additional 66 patients. Investigators and the NCI conducted the open-label, single-arm clinical trial of the combination of entinostat and azacitidine in patients with recurrent metastatic NSCLC. All of these patients had been heavily pre-treated with a median of three prior regimens for metastatic disease and had shown no meaningful response to such treatment. Although this population was heavily pre-treated, patients given the combination of entinostat and azacitidine achieved objective responses, including a complete response, a partial response with complete resolution of multiple liver metastases, and several patients with durable stable disease. Our collaborators also noted that patients receiving therapy after progressing on entinostat and azacitidine had a higher than

expected objective response rate to subsequent therapies. Most striking was that all five patients that received an immune therapy such as nivolumab as their next therapy, derived clinical benefit, three with partial responses and two with durable stable diseases.

Development Plan of Entinostat in Lung Cancer

The following trials of entinostat combinations planned by investigators at Johns Hopkins University are designed to build on the initial NCI-funded trial data in metastatic NSCLC to further validate the observation that dual epigenetic therapy can augment the clinical activity of cytotoxic or immune therapy in these patients.

- ***NCI-9253: Epigenetic Priming to Chemotherapy Trial.*** This NCI-funded Phase 2 clinical trial is currently enrolling up to 165 metastatic NSCLC patients in three different arms, (i) chemotherapy alone, (ii) chemotherapy preceded by injectable azacitidine plus entinostat, or (iii) chemotherapy preceded by oral azacitidine plus entinostat. The primary objective of the trial is to determine the percent of patients without disease progression at six months. We expect to see the proof-of-concept data for this trial in late 2015.
- ***J1353: Epigenetic Priming to Immunotherapy Trial.*** This investigator-sponsored Phase 2 clinical trial, funded by *Stand Up To Cancer*, is currently enrolling up to 120 patients with metastatic NSCLC and is designed to test the ability of epigenetic therapy—either oral azacitidine alone or the entinostat and azacitidine combination—to enhance the response of NSCLC patients to nivolumab, a type of immunotherapy. We expect to see the proof-of-concept data for this trial in late 2015.

Development Plan of Entinostat as an Immunomodulatory Agent

In order to fully understand the potential for entinostat to potentiate the activity of immune therapies, we plan to work with our collaborators to initiate a series of clinical studies in combination with targeted immune therapies in melanoma, breast cancer, lung cancer and other solid tumors. Data from a completed Phase 2 NSCLC clinical trial with entinostat combined with azacitidine suggest that entinostat may prime tumors to be more responsive to subsequent immune therapy targeting PD-1 or its ligand. Further, preclinical studies have indicated that entinostat works to enhance the activity of immune therapy by inhibiting the activity of host immune cells that function to suppress the activity of anti-tumor immune responses.

- ***ENCORE 601: Phase 1b Clinical Trial.*** Based on these findings and emerging preclinical data demonstrating synergistic combined anti-tumor effects of entinostat and immune therapy, we are currently planning a Phase 1b clinical trial to examine the combination of entinostat with antibodies targeting PD1 to characterize the safety, define a recommended Phase 2 dose and assess the preliminary clinical activity of this combination. The trial will combine entinostat with an anti-PD1 antibody in patients with metastatic NSCLC or melanoma. We anticipate initiating this trial in early 2015 with safety, recommended Phase 2 dose, preliminary activity and correlative data available in mid-2016.

Development Plan of Entinostat in Other Cancer Indications

Solid Tumors

In addition to our programs in breast and lung cancer, we believe there are numerous opportunities to expand the indications in which entinostat may be used in combination therapy to target epigenetic and immunologic mechanisms of resistance. One example is the NCI-

funded trial, NCI-7870, which is focused on determining how entinostat may affect the immune system of patients with renal cell carcinoma to improve outcomes to aldesleukin (IL-2), an approved immune therapy for renal cell carcinoma. Preliminary results have established that entinostat may safely be given in combination with aldesleukin and indicate that entinostat potentially enhances the response to aldesleukin with evidence of causing beneficial changes in certain immune cell function. The trial is currently enrolling patients and we expect further data to be available beginning in 2014 and continuing through the end of 2017.

Hematological Malignancies

While focused on solid tumors, we believe that opportunities for epigenetic therapy with entinostat may exist in a number of hematological indications. The four epigenetic therapies that are currently approved in the United States are used in the treatment of T-cell lymphomas (the HDAC inhibitors vorinostat and romidepsin) and myelodysplastic syndrome (the DNMT inhibitors azacitidine and decitabine). We therefore are pursuing hematological indications where clinical activity has been demonstrated for epigenetic agents as single agents. We are working with the NCI on combination trials to determine proof-of-concept for novel combinations that address areas of significant unmet need for hematological indications, including the following trials:

- ***ENGAGE 501: Completed Phase 2 Clinical Trial in Relapsed and Refractory Hodgkin's Lymphoma.*** We conducted a Phase 2 clinical trial evaluating entinostat as monotherapy for the treatment of Hodgkin's lymphoma. We designed the trial based on preclinical studies in which entinostat demonstrated a dual effect on apoptotic and immunomodulatory pathways that resulted in significant anti-tumor activity in cell lines and primary patient samples. The trial enrolled 49 patients with relapsed and refractory Hodgkin's lymphoma. The primary objective of this trial was to establish the objective response rate for single agent entinostat in Hodgkin's lymphoma. In the trial, entinostat was well-tolerated and exhibited antitumor activity as a single agent as measured by tumor regression as observed in approximately 60% of the evaluable patients. The most common entinostat related AEs were thrombocytopenia, neutropenia, and anemia. Based on these results and in consultation with our investigators, we may plan to further study entinostat in combination with other agents such as gemcitabine, vincristine or SGN-35 earlier in the disease course.
- ***NA-00038036: Acute Myeloid Leukemia.*** We are collaborating with investigators at Johns Hopkins University and Celgene Corporation to conduct an investigator-sponsored Phase 2 clinical trial of entinostat in combination with azacitidine in up to 108 elderly patients with acute myeloid leukemia, or AML. The primary objective is to estimate the response rate in elderly patients with AML, with de novo or secondary AML and who have declined or are ineligible for cytotoxic chemotherapy, or in patients who have relapsed leukemia despite one prior standard chemotherapy regimen. There have been 24 patients enrolled and we are expecting data from this trial in early 2015.
- ***NCI-8298: Acute Lymphoblastic Leukemia.*** We have collaborated with the NCI to conduct a Phase 1 clinical trial evaluating the safety and feasibility of combining entinostat with clofarabine for the treatment of Philadelphia chromosome-negative, acute lymphoblastic leukemia or bilineage leukemia. Our collaborators have enrolled a total of 28 patients and results of this study were presented at the 2013 American Society of Hematology conference. The investigators reported that combination therapy with entinostat-clofarabine is feasible and is well tolerated with minimal toxicity. The investigators also indicated that promising responses were observed in older patients that were not otherwise able to receive multi-agent induction chemotherapy upfront. This is notable given the low dose of clofarabine used in every cohort.

Collaborations

We have collaborated with a limited number of third parties on the clinical development of entinostat. For example, we have supplied entinostat for use in investigator-sponsored clinical trials conducted at Johns Hopkins University and we may enter into similar arrangements with other hospitals and medical centers in the future. Investigator-sponsored clinical trials are generally performed under an IND application filed by the investigator or his or her institution. The investigator or institution generally also fully funds these clinical trials. To date, our sole obligation with respect to these investigator-sponsored clinical trials has been to supply entinostat for use in the trials. Additionally, we have an ongoing collaboration with the NCI for the clinical development of entinostat. As part of this collaboration, the NCI sponsors and funds clinical studies on entinostat that are conducted by other groups or institutions, such as Johns Hopkins University and ECOG-ACRIN. Under a separate agreement with ECOG-ACRIN, we have agreed to make additional payments directly to ECOG-ACRIN to support its performance of an NCI-sponsored pivotal Phase 3 clinical trial of entinostat. All NCI-sponsored clinical studies are performed under an IND application filed by the NCI. Certain other details of our collaboration with the NCI and our agreement with ECOG-ACRIN are described below.

Collaborative Research and Development Agreement with the NCI

Our collaboration with the NCI is governed by a Collaborative Research and Development Agreement, or CRADA, between us and the NCI. The CRADA was originally signed by Mitsui Pharmaceuticals, Inc., or Mitsui, and was then assigned to Schering AG following Schering AG's acquisition of Mitsui. In 2007, Schering AG (then known as Bayer Schering Pharma AG) agreed to assign the CRADA to us in connection with the execution of a license, development and commercialization agreement, or the Bayer license agreement, with Bayer.

Under the CRADA, as amended, the NCI sponsors clinical studies on entinostat using researchers at the NCI as well as NCI-funded researchers at other institutions, including ECOG-ACRIN and Johns Hopkins University. In return, we receive access to the data generated in these clinical studies, and we are obligated to supply the clinical trial sites with sufficient quantities of entinostat. Additionally, upon initiation of the pivotal Phase 3 clinical trial being sponsored by the NCI, we will be required to make an annual payment to a particular NCI laboratory to help support certain research studies related to this clinical trial. We have no other payment obligations under the CRADA.

We own any intellectual property generated in the course of the collaboration with the NCI, or Collaboration IP, to the extent that Collaboration IP is generated by our employees. We also have an exclusive option to obtain an exclusive or non-exclusive commercialization license under Collaboration IP generated by the NCI. With respect to any Collaboration IP that is owned by or licensed to us, we have agreed to grant the United States government a non-exclusive license to practice or have practiced this Collaboration IP throughout the world by or on behalf of the government for research or other government purposes.

Either party may terminate the CRADA either by mutual consent or unilaterally upon advance written notice to the other party. Absent such early termination, the CRADA will expire on May 21, 2017.

Clinical Trial Agreement with Eastern Cooperative Oncology Group

In March 2014, we entered into a clinical trial agreement with Eastern Cooperative Oncology Group, a contracting entity for ECOG-ACRIN, that describes the parties' obligations with respect to the NCI-sponsored pivotal Phase 3 clinical trial of entinostat. Under the terms of the clinical

trial agreement, ECOG-ACRIN will perform this clinical trial in accordance with the clinical trial protocol and a mutually agreed scope of work. We will provide a fixed level of financial support for the clinical trial through an upfront payment of $695,000 and a series of time- and milestone-based payments of up to $970,000, and we are obligated to supply entinostat and placebo to ECOG-ACRIN for use in the clinical trial. Our aggregate payment obligations under this agreement are approximately $19.4 million.

Data and inventions from the Phase 3 clinical trial are owned by ECOG-ACRIN. We have access to the data generated in the clinical trial, both directly from ECOG-ACRIN under the clinical trial agreement, as well as from the NCI through our agreement with it. Additionally, ECOG-ACRIN has granted us a non-exclusive license to any inventions or discoveries that are derived from entinostat as a result of its use during the clinical trial, along with a first right to negotiate an exclusive license to any of these inventions or discoveries.

Either party may terminate the clinical trial agreement in the event of an uncured material breach by the other party or if the FDA or NCI withdraws the authorization to perform the clinical trial in the United States. The parties may jointly terminate the clinical trial agreement if the parties agree that safety-related issues support termination.

Sales and Marketing

We believe that it is possible for us to build a commercial infrastructure to support sales of entinostat in the United States. We intend to build a sales force to target a well-defined group of medical oncologists, primarily in the community or academic setting, who are responsible for the care and treatment of patients with metastatic breast cancer. This effort would need to include internal support for the management of sales, marketing, distribution and customer accounts which are comprised of managed care, group purchasing, specialty pharmacies, oncology group networks and governmental accounts. While we may have to commit significant financial and management resources to commercial activities prior to the conclusion of the first Phase 3 clinical trial, we would have the option to collaborate with a pharmaceutical company to enhance our capabilities. Outside the United States, we plan to seek distributor or pharmaceutical partners for sales and marketing activities.

Manufacturing

We do not own or operate manufacturing facilities that meet the FDA's current good manufacturing practices, or cGMP, requirements for the production of entinostat, and we do not have plans to develop our own manufacturing operations in the foreseeable future. Initially, Bayer Pharma AG (formerly known as Bayer Schering Pharma AG), or Bayer, manufactured and supplied our requirements of entinostat, but effective in May 2012, manufacturing responsibility for entinostat was transferred to us, by mutual agreement of the parties. We currently rely on third-party contract manufacturers for all of our required raw materials, and finished product for our preclinical research and clinical trials. We do not have long-term agreements with any of these third parties. We also do not have any current contractual relationship for the manufacture of commercial supplies of entinostat if it is approved. If entinostat is approved by any regulatory agency, we intend to enter into agreements with a third-party contract manufacturer and one or more backup manufacturers for the commercial production of entinostat. Development and commercial quantities of any products that we develop will need to be manufactured in facilities, and by processes, that comply with the requirements of the FDA and the regulatory agencies of other jurisdictions in which we are seeking approval.

Competition

The biotechnology industry is highly competitive and subject to rapid and significant technological change. We face competition from major pharmaceutical companies, specialty pharmaceutical companies and biotechnology companies worldwide. Key competitive factors affecting the commercial success of entinostat are likely to be efficacy, safety and tolerability profile, convenience and method of dosing, price and reimbursement.

The market for cancer therapies is large and competitive. There are numerous approved therapies for treating breast and lung cancer. Many of these approved drugs are well-established therapies or products and are widely accepted by physicians, patients and third-party payors. Some of these drugs are branded and subject to patent protection, and others are available as generics. Insurers and other third-party payors may encourage the use of generic products or specific branded products. We expect that if entinostat is approved, it will be priced at a significant premium over competitive generic products. This pricing premium may make it difficult for us to differentiate entinostat from currently approved therapies and impede adoption of our product, which may adversely impact our business strategy. In addition, many companies are developing new therapeutics, and we cannot predict what the standard of care will be as entinostat continues in clinical development.

If entinostat in combination with exemestane were approved for the treatment of ER+ advanced breast cancer, it would face competition from currently approved and marketed products, such as everolimus. Further competition could arise from products currently in development, including Pfizer Inc.'s palbociclib, which is currently in Phase 3 clinical testing in first-line HR-positive advanced breast cancer and Novartis Oncology Global's buparlisib, which is currently in Phase 3 clinical testing in HR-positive advanced breast cancer.

In addition to entinostat, there are other therapies combined with aromatase inhibitors that have demonstrated promising clinical benefit. The most advanced of these is everolimus, which was approved in 2012 for use in combination with exemestane to treat certain postmenopausal women with advanced ER+, HER2-negative breast cancer. We believe that entinostat is differentiated from everolimus based on its efficacy, safety and mechanism of action.

Many of our existing or potential competitors have substantially greater financial, technical and human resources than we do and significantly greater experience in the discovery and development of product candidates, obtaining FDA and other regulatory approvals of products and the commercialization of those products. Our competitors may be more successful than we may be in obtaining FDA approval for drugs and achieving widespread market acceptance. Our competitors' drugs may be more effective, or more effectively marketed and sold, than any drug we may commercialize and may render our product candidates obsolete or non-competitive before we can recover the expenses of developing and commercializing any of our product candidates. Our competitors may also obtain FDA or other regulatory approval for their products more rapidly than we may obtain approval for ours. We anticipate that we will face intense and increasing competition as new drugs enter the market and advanced technologies become available.

Intellectual Property

Patents and Property Rights

Through licensed intellectual property and our owned intellectual property we seek patent protection in the United States and internationally for entinostat, its methods of use and

processes for its manufacture, as well as for other technologies, where appropriate. Our policy is to actively seek to protect our proprietary position by, among other things, filing patent applications in the United States and abroad claiming our proprietary technologies that are important to the development of our business. We also rely on trade secrets, know-how, continuing technological innovation and in-licensing opportunities to develop and maintain our proprietary position.

We cannot be sure that patents will be granted with respect to any of our owned or licensed pending patent applications or with respect to any patent applications filed by us or our licensors in the future, nor can we be sure that any of our existing owned or licensed patents or any patents that may be granted to us or to our licensors in the future will protect our technology. Our success will depend significantly on our ability to obtain and maintain patent and other proprietary protection for the technologies that we consider important to our business, defend our patents, preserve the confidentiality of our trade secrets, operate our business without infringing the patents and proprietary rights of third parties, and prevent third parties from infringing our proprietary rights.

Entinostat Patent Portfolio

We also strive to protect entinostat with multiple layers of patents. As of August 28, 2014, our portfolio included three owned pending U.S. non-provisional patent applications and one owned Patent Cooperation Treaty, or PCT, application. We have filed national phase applications in the Eurasia Regional Patent Office, Ukraine and Georgia. We have assigned our rights to the application we filed in the Eurasia Regional Patent Office to Domain Russia Investments Limited, or DRI. We have also assigned our rights to the applications we filed in Ukraine and Georgia to NovaMedica LLC, or NovaMedica. We have also filed national phase applications in the United States, Canada, Japan, Brazil and Mexico based on our owned PCT application. We have also initiated the filing of additional national phase applications based on our owned PCT application at the European Patent Office, or EPO, China, India and Australia. Our owned U.S. pending applications and our owned PCT application relate to various aspects of treating patients with entinostat. Our owned entinostat patent portfolio consists of pending U.S. patent applications directed to methods of treating cancer patients by administration of entinostat according to selected dosing regimens, methods of treating cancer patients by administration of entinostat in combination with an HER2 inhibitor and methods of treating lung cancer patients by administration of entinostat in combination with an EGFR inhibitor. Our owned PCT application is directed to treating selected breast cancer patients by administration of entinostat and an aromatase inhibitor. If issued, patents based on our owned pending U.S. applications and non-U.S. filings based on our owned PCT application would expire between November 2028 and December 2032.

The patent portfolio we licensed from Bayer contains a number of issued U.S. and foreign patents as well as patent applications pending outside the United States. A number of the patents and patent applications we licensed from Bayer are directed to entinostat while other patents and patent applications are directed to compounds other than entinostat. As of August 28, 2014, the portfolio we licensed from Bayer included 8 issued U.S. patents, 53 granted non-U.S. patents and 31 patent applications pending in non-U.S. patent offices. For example, the portfolio we licensed from Bayer includes reissue U.S. Patent RE39,754, which covers a genus of benzamide compounds including entinostat or SNDX-275. RE39,754 is a composition of matter patent having an initial term expiring in 2017.

The portfolio we licensed from Bayer also includes U.S. Patent 7,973,166, or the ’166 patent, which covers a crystalline polymorph of entinostat which is referred to as crystalline polymorph B, the crystalline polymorph used in the clinical development of entinostat. Many

compounds can exist in different crystalline forms. A compound which in the solid state may exhibit multiple different crystalline forms is called polymorphic, and each crystalline form of the same chemical compound is termed a polymorph. A new crystalline form of a compound may arise, for example, due to a change in the chemical process or the introduction of an impurity. Such new crystalline forms may be patented. The ‘166 patent expires in 2029. By comparison, the U.S. Patent RE39,754, which expires in 2017, covers the chemical entity of entinostat and any crystalline or non-crystalline form of entinostat. On March 7, 2014, our licensor Bayer applied for reissue of the ‘166 patent. The reissue application seeks to add three additional inventors to the ‘166 patent. If the reissue is granted, the original ‘166 patent will be surrendered and the reissue patent will have the same force and effect as the original ‘166 patent and the same 2029 expiration date.

Of the 53 foreign granted patents we licensed from Bayer, 17 are foreign counterparts of the ‘166 patent that cover crystalline polymorph B, including one patent granted by the EPO, which was validated in 37 EPO countries, and one patent granted by the Eurasia Regional Patent Office which was validated in nine countries. Likewise, 20 of the 31 pending foreign applications are counterparts of the ‘166 crystalline polymorph B patent. Other patents and patent applications in the licensed Bayer portfolio cover methods of treatment by administration of entinostat. For example, U.S. Patent 7,317,028, which expires in 2017, covers methods of treating selected cancers by administration of entinostat; U.S. Patent 7,687,525, which also expires in 2017, covers methods of treating autoimmune disease by administration of entinostat; U.S. Patent 6,320,078, which expires in 2019, covers methods of manufacturing entinostat; U.S. Patent No. 8,026,239, which expires in 2017, covers methods of treating certain malignant tumors by administration of a compound within a subgenus of benzamide compounds including entinostat; U.S. Patent RE40,703, which expires in 2017, covers a subgenus of benzamide compounds that does not include entinostat; and U.S. Patent 6,794,392, which expires in 2017, covers a subgenus of benzamide compounds that does not include entinostat.

As of August 28, 2014, the portfolio we licensed from the Regents of the University of Colorado, or the University of Colorado, included one issued U.S. patent, four pending U.S. patent applications, one granted foreign patents and at least seven pending foreign patent applications. A number of the patents and patent applications we licensed from the University of Colorado cover methods of treatment of lung cancer patients based on administration of entinostat in combination with EGFR inhibitors such as erlotinib and gefitinib. Other patents and patent applications are directed to selection of patients for treatment by administration of an EGFR inhibitor based on the level of expression of the biomarker E-cadherin in tissue obtained from the patient.

The term of individual patents depends upon the legal term of the patents in the countries in which they are obtained. In most countries in which we file, the patent term is 20 years from the date of filing the non-provisional application or PCT application.

In the United States, a patent’s term may be lengthened by patent term adjustment, which compensates a patentee for administrative delays by the U.S. Patent and Trademark Office, or USPTO, in granting a patent, or may be shortened if a patent is terminally disclaimed over an earlier-filed patent. The term of a patent that covers an approved drug may also be eligible for patent term extension, which permits patent term restoration as compensation for the patent term lost during the development and regulatory review process. To obtain a patent extension in the United States, the term of the relevant patent must not have expired before the extension application, the patent cannot have been extended previously under this law, an application for extension must be submitted, the product must be subject to regulatory review prior to its commercialization, and the permission for the commercial marketing or use of the product after such regulatory review period is the first permitted commercial marketing or use of the product.

If our future products contain active ingredients which have not been previously approved, we may be eligible for a patent term extension in the United States. In the United States, we expect to seek extension of patent terms under the Drug Price Competition and Patent Term Restoration Act of 1984, which permits a patent term extension of up to five years beyond the expiration of the patent for patent claims covering a new chemical entity. If patent extensions are available to us outside of the United States, we would expect to file for a patent term extension in applicable jurisdictions.

In-Licensed Intellectual Property

License, Development and Commercialization Agreement with Bayer

In March 2007, we entered into the Bayer license agreement, pursuant to which we obtained a worldwide, exclusive license to develop and commercialize entinostat and any other products containing the same active ingredient. The Bayer license agreement, as amended, permits us to use entinostat or other licensed products for the treatment of any human disease, and we are obligated to use commercially reasonable efforts to develop, manufacture and commercialize licensed products for all commercially reasonable indications. Initially, Bayer manufactured and supplied our requirements of entinostat, but effective May 2012, manufacturing responsibility for entinostat was transferred to us, by mutual agreement of the parties.

To date, our payments to Bayer under the Bayer license agreement have been limited to an upfront license fee of $2 million. We are obligated to pay up to approximately $50 million in the aggregate upon obtaining certain milestones in the development and marketing approval of entinostat, assuming that we pursue at least two different indications for entinostat, and for certain other rights granted to us. We are also obligated to pay Bayer $100 million in aggregate sales milestones, and a tiered single-digit royalty on net sales of entinostat or other licensed products under the Bayer license agreement. We are obligated to pay Bayer these royalties on a country-by-country basis for the life of the relevant licensed patents or 15 years after the first commercial sale of entinostat in such country, whichever is longer. We cannot determine the date on which our royalty payment obligations to Bayer would expire because no commercial sales of entinostat have occurred and the last-to-expire relevant patent covering entinostat in a given country may change in the future.

The Bayer license agreement will remain in effect until the expiration of our royalty obligations under the agreement in all countries. Either party may terminate the Bayer license agreement in its entirety or with respect to certain countries in the event of an uncured material breach by the other party. Either party may terminate the Bayer license agreement if voluntary or involuntary bankruptcy proceedings are instituted against the other party, if the other party makes an assignment for the benefit of creditors, or upon the occurrence of other specific events relating to the insolvency or dissolution of the other party. Bayer may terminate the Bayer license agreement if we seek to revoke or challenge the validity of any patent licensed to us by Bayer under the Bayer license agreement or if we procure or assist a third party to take any such action.

Exclusive License Agreement with the University of Colorado

In March 2013, we entered into an exclusive license agreement, or the Colorado license agreement, with the University of Colorado, pursuant to which we obtained a worldwide, sublicensable, exclusive license under certain patent right directed to the use of HDAC inhibitors, including entinostat, for the treatment of cancer. We also received a non-exclusive license to related know-how.

On November 13, 2013, we issued 20,325 shares of common stock to University License Equity Holdings, Inc., an affiliate of the University of Colorado, in lieu of the $50,000 initial license fee payment, and we owe a deferred license fee of $150,000 upon the earlier of the execution of a sublicense, the closing of a financing satisfying certain financial metrics, or the initiation of clinical development of a licensed product for a particular indication. We may choose to pay this deferred license fee in cash or by issuing to the University of Colorado an equivalent number of shares of our common stock. We will owe the University of Colorado one or more immaterial milestone payments upon the occurrence of certain events relating to the development, regulatory approval or commercialization of licensed products, or the issuance of certain types of patent claims in the licensed patent rights. We are also obligated to pay the University of Colorado an immaterial minimum annual royalty payment, a percentage share of any non-royalty payments that we receive from sublicensees and a low single-digit royalty on net sales of licensed products by us or our sublicensees. Because the licensed patent rights do not cover all uses of entinostat or other HDAC inhibitors, but instead claim specific indications, we will only owe royalties on net sales for these specific indications. Our royalty obligations continue for the life of the licensed patent rights.

The Colorado license agreement will remain in effect until the expiration of the last-to-expire licensed patent rights. We may terminate the Colorado license agreement at any time upon advance written notice to the University of Colorado. The University of Colorado may terminate the Colorado license agreement in the event of our uncured material breach, if we violate any applicable law or regulation, if we become insolvent or if we institute a legal action challenging the validity of any licensed patent right.

Confidential Information and Inventions Assignment Agreements

We require our employees and consultants to execute confidentiality agreements upon the commencement of employment, consulting or collaborative relationships with us. These agreements provide that all confidential information developed or made known during the course of the relationship with us be kept confidential and not disclosed to third parties except in specific circumstances.

In the case of employees, the agreements provide that all inventions resulting from work performed for us, utilizing our property or relating to our business and conceived or completed by the individual during employment shall be our exclusive property to the extent permitted by applicable law. Our consulting and service agreements also provide for assignment to us of any intellectual property resulting from services performed for us.

Government Regulation and Product Approval

Government authorities in the United States, at the federal, state and local level, and in other countries extensively regulate, among other things, the research, development, testing, manufacturing, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, post-approval monitoring and reporting, marketing and export and import of drug products such as those we are developing. Entinostat and any other drug candidates that we develop must be approved by the FDA before they may be legally marketed in the United States and by the appropriate foreign regulatory agency before they may be legally marketed in foreign countries.

United States Drug Development Process

In the United States, the FDA regulates drugs under the Federal Food, Drug, and Cosmetic Act, or FDCA, and related regulations. Drugs are also subject to other federal, state and local statutes and regulations. Failure to comply with the applicable United States regulatory requirements at any time during the product development process, approval process or after approval may subject an applicant to administrative or judicial sanctions. These sanctions could include the imposition by the FDA or an Institutional Review Board, or IRB, of a clinical hold on trials, the FDA's refusal to approve pending applications or supplements, withdrawal of an approval, warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties or criminal prosecution. The process required by the FDA before drugs may be marketed in the United States generally involves the following:

- completion of extensive preclinical laboratory tests and animal studies in accordance with applicable regulations, including the FDA's good laboratory practice, or GLP regulations;
- submission of an IND application which must become effective before clinical trials may begin;
- performance of adequate and well-controlled human clinical trials in accordance with applicable regulations, including the FDA's current good clinical practice, or GCP, regulations to establish the safety and efficacy of the proposed drug for its intended use or uses;
- submission to the FDA of an NDA for a new drug product;
- a determination by the FDA within 60 days of its receipt of an NDA to accept the NDA for filing and review;
- satisfactory completion of an FDA inspection of the manufacturing facility or facilities where the drug is produced to assess compliance with the FDA's cGMP regulations to assure that the facilities, methods and controls are adequate to preserve the drug's identity, strength, quality and purity;
- potential FDA audit of the preclinical and/or clinical trial sites that generated the data in support of the NDA; and
- FDA review and approval of the NDA prior to any commercial marketing or sale of the drug in the United States.

Before testing any compounds with potential therapeutic value in humans, the drug candidate enters the preclinical testing stage. Preclinical tests include laboratory evaluations of product chemistry, toxicity and formulation, as well as animal studies to assess the potential safety and activity of the drug candidate. The conduct of the preclinical tests must comply with federal regulations and requirements including GLPs. The sponsor must submit the results of the preclinical tests, together with manufacturing information, analytical data, any available clinical data or literature and a proposed clinical protocol, to the FDA as part of the IND application. An IND application is a request for authorization from the FDA to administer an investigational drug product to humans. The IND application automatically becomes effective 30 days after receipt by the FDA unless the FDA within the 30-day time period raises concerns or questions about the conduct of the clinical trial. In such case, the IND application sponsor must resolve any outstanding concerns with the FDA before the clinical trial may begin. A separate submission to the existing IND application must be made for each successive clinical trial to be conducted during product development. Further, an independent IRB for each site proposing to conduct the clinical trial must review and approve the plan for any clinical trial before it

commences at that site. Informed consent must also be obtained from each study subject. Regulatory authorities, an IRB, a data safety monitoring board or the sponsor, may suspend or terminate a clinical trial at any time on various grounds, including a finding that the participants are being exposed to an unacceptable health risk.

Human clinical trials are typically conducted in three sequential phases that may overlap or be combined:

- ***Phase 1***. The drug is initially given to healthy human subjects or patients and tested for safety, dosage tolerance, absorption, metabolism, distribution and excretion, the side effects associated with increasing doses, and if possible, to gain early evidence on effectiveness.
- ***Phase 2***. The drug is evaluated in a limited patient population to identify possible adverse effects and safety risks, to preliminarily evaluate the efficacy of the product for specific targeted diseases or conditions and to determine dosage tolerance, optimal dosage and dosing schedule.
- ***Phase 3***. Clinical trials are undertaken to further evaluate dosage, clinical efficacy and safety at geographically dispersed clinical trial sites. These clinical trials are intended to establish the overall benefit-risk ratio of the product and to provide an adequate basis for product approval by the FDA.

Post-approval studies, or Phase 4 clinical trials, may be conducted after initial marketing approval. These studies may be required by the FDA as a condition of approval and are used to gain additional experience from the treatment of patients in the intended therapeutic indication. The FDA also now has express statutory authority to require post-market clinical studies to address safety issues.

The FDCA permits the FDA and an IND sponsor to agree in writing on the design and size of clinical studies intended to form the primary basis of a claim of effectiveness in an NDA. This process is known as a SPA. The protocol for the Phase 3 clinical trial was reviewed and agreed upon by the FDA under a SPA agreement with the NCI in January 2014. A SPA agreement is not a guarantee of product approval by the FDA or approval of any permissible claims about the product. The FDA retains significant latitude and discretion in interpreting the terms of the SPA agreement and the data and results from any study that is the subject of the SPA agreement. In particular, the SPA agreement is not binding on the FDA if previously unrecognized public health concerns later come to light, other new scientific concerns regarding product safety or efficacy arise, the IND sponsor fails to comply with the protocol agreed upon, or the relevant data, assumptions, or information provided by the IND sponsor when requesting a SPA agreement change, are found to be false statements or misstatements, or are found to omit relevant facts. A SPA agreement may not be changed by the sponsor or the FDA after the trial begins except with the written agreement of the sponsor and the FDA, or if the FDA determines that a substantial scientific issue essential to determining the safety or effectiveness of the drug was identified after the testing began.

Progress reports detailing the results of the clinical trials must be submitted at least annually to the FDA and written IND safety reports must be submitted to the FDA and the investigators for serious and unexpected adverse events or any finding from tests in laboratory animals that suggests a significant risk for human subjects. Phase 1, Phase 2 and Phase 3 clinical trials may fail to be completed successfully within any specified period, if at all. The FDA, the IRB or the sponsor may suspend or terminate a clinical trial at any time on various grounds, including a finding that the research subjects or patients are being exposed to an unacceptable health risk. Similarly, an IRB can suspend or terminate approval of a clinical trial at

its institution if the clinical trial is not being conducted in accordance with the IRB's requirements or if the drug has been associated with unexpected serious harm to patients. Additionally, some clinical trials are overseen by an independent group of qualified experts organized by the clinical trial sponsor, known as a data safety monitoring board or committee. This group provides authorization for whether or not a trial may move forward at designated checkpoints based on access to certain data from the study. We may also suspend or terminate a clinical trial based on evolving business objectives and/or competitive climate.

Concurrent with clinical trials, companies usually complete additional animal studies and must also develop additional information about the chemistry and physical characteristics of the drug as well as finalize a process for manufacturing the product in commercial quantities in accordance with cGMP requirements. The manufacturing process must be capable of consistently producing quality batches of the drug candidate and, among other things, must include developed methods for testing the identity, strength, quality and purity of the final drug. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to demonstrate that the drug candidate does not undergo unacceptable deterioration over its shelf life.

FDA Review and Approval Processes

In order to obtain approval to market a drug in the United States, a marketing application must be submitted to the FDA that provides data establishing to the FDA's satisfaction the safety and effectiveness of the investigational drug for the proposed indication. Each NDA submission requires a substantial user fee payment unless a waiver or exemption applies. The application includes all relevant data available from pertinent nonclinical studies and clinical trials, including negative or ambiguous results as well as positive findings, together with detailed information relating to the product's chemistry, manufacturing, controls and proposed labeling, among other things. Data can come from company-sponsored clinical trials intended to test the safety and effectiveness of a use of a product, or from a number of alternative sources, including studies initiated by investigators.

The FDA will initially review the NDA for completeness before it accepts it for filing. The FDA has 60 days from its receipt of an NDA to determine whether the application will be accepted for filing based on the agency's threshold determination that the application is sufficiently complete to permit substantive review. If it is not, the FDA may refuse to file the NDA and request additional information, in which case the application must be resubmitted with the supplemental information, and review of the application is delayed. After the NDA submission is accepted for filing, the FDA reviews the NDA to determine, among other things, whether the proposed product is safe and effective for its intended use, and whether the product is being manufactured in accordance with cGMP to assure and preserve the product's identity, strength, quality and purity. The FDA may refer applications for novel drug products or drug products that present difficult questions of safety or efficacy to an advisory committee, typically a panel that includes clinicians and other experts, for review, evaluation and a recommendation as to whether the application should be approved and, if so, under what conditions. The FDA is not bound by the recommendations of an advisory committee, but it considers such recommendations carefully when making decisions.

Based on pivotal Phase 3 clinical trial results submitted in an NDA, upon the request of an applicant, the FDA may grant a priority review designation to a product, which sets the target date for FDA action on the application at 6 months, rather than the standard 10 months. Priority review is given where preliminary estimates indicate that a product, if approved, has the potential to provide a significant improvement compared to marketed products or offers a

therapy where no satisfactory alternative therapy exists. Priority review designation does not change the scientific or medical standard for approval or the quality of evidence necessary to support approval. Whether priority or standard review applies, an additional 60 days is added to the target date for FDA action for new molecular entities.

After the FDA completes its initial review of an NDA, it will communicate to the sponsor that the drug will either be approved, or it will issue a complete response letter to communicate that the NDA will not be approved in its current form and inform the sponsor of changes that must be made or additional clinical, nonclinical or manufacturing data that must be received before the application can be approved, with no implication regarding the ultimate approvability of the application.

Before approving an NDA, the FDA will inspect the facilities at which the product is manufactured. The FDA will not approve the product unless it determines that the manufacturing processes and facilities are in compliance with cGMP requirements and adequate to assure consistent production of the product within required specifications. Additionally, before approving an NDA, the FDA may inspect one or more clinical sites to assure compliance with GCP. If the FDA determines the application, manufacturing process or manufacturing facilities are not acceptable, it typically will outline the deficiencies and often will request additional testing or information. This may significantly delay further review of the application. If the FDA finds that a clinical site did not conduct the clinical trial in accordance with GCP, the FDA may determine the data generated by the clinical site should be excluded from the primary efficacy analyses provided in the NDA. Additionally, notwithstanding the submission of any requested additional information, the FDA ultimately may decide that the application does not satisfy the regulatory criteria for approval.

Even if a product candidate receives regulatory approval, the approval may be limited to specific disease states, patient populations and dosages, or might contain significant limitations on use in the form of warnings, precautions or contraindications, or in the form of onerous risk management plans, restrictions on distribution, or post-marketing study requirements. For example, the FDA may require Phase 4 testing, which involves clinical trials designed to further assess a drug safety and effectiveness and may require testing and surveillance programs to monitor the safety of approved products that have been commercialized. The FDA may also determine that a risk evaluation and mitigation strategy, or REMS, is necessary to assure the safe use of the drug. If the FDA concludes a REMS is needed, the sponsor of the NDA must submit a proposed REMS, and the FDA will not approve the NDA without an approved REMS, if required. Depending on the FDA's evaluation of a drug's risks, a REMS may include medication guides, physician communication plans, or elements to assure safe use, such as restricted distribution requirements, patient registries and other risk minimization tools. Following approval of an NDA with a REMS, the sponsor is responsible for marketing the drug in compliance with the REMS and must submit periodic REMS assessments to the FDA.

Further, even after regulatory approval is obtained, later discovery of previously unknown problems with a product may result in restrictions on the product or even complete withdrawal of the product from the market. In addition, we cannot predict what adverse governmental regulations may arise from future U.S. or foreign governmental action.

Expedited Review Programs

The FDA has a Fast Track program that is intended to expedite or facilitate the process for reviewing new drug products that meet certain criteria. Specifically, new drugs are eligible for Fast Track designation if they are intended to treat a serious or life-threatening disease or

condition and demonstrate the potential to address unmet medical needs for the disease or condition. Fast Track designation applies to the combination of the product and the specific indication for which it is being studied. Unique to a Fast Track product, the FDA may consider for review sections of the NDA on a rolling basis before the complete application is submitted, if the sponsor provides a schedule for the submission of the sections of the NDA, the FDA agrees to accept sections of the NDA and determines that the schedule is acceptable, and the sponsor pays any required user fees upon submission of the first section of the NDA.

Any product submitted to the FDA for approval, including a product with a Fast Track designation, may also be eligible for other types of FDA programs intended to expedite development and review, such as priority review and accelerated approval. A product is eligible for priority review if it has the potential to provide safe and effective therapy where no satisfactory alternative therapy exists or a significant improvement in the treatment, diagnosis or prevention of a disease compared to marketed products. The FDA will attempt to direct additional resources to the evaluation of an application for a new drug designated for priority review in an effort to facilitate the review. Additionally, a product may be eligible for accelerated approval. Drug products studied for their safety and effectiveness in treating serious or life-threatening diseases or conditions may receive accelerated approval upon a determination that the product has an effect on a surrogate endpoint that is reasonably likely to predict clinical benefit, or on a clinical endpoint that can be measured earlier than irreversible morbidity or mortality, that is reasonably likely to predict an effect on irreversible morbidity or mortality or other clinical benefit, taking into account the severity, rarity, or prevalence of the condition and the availability or lack of alternative treatments. As a condition of approval, the FDA may require that a sponsor of a drug product receiving accelerated approval perform adequate and well-controlled post-marketing clinical studies. In addition, the FDA currently requires as a condition for accelerated approval pre-approval of promotional materials, which could adversely impact the timing of the commercial launch of the product.

The FDA may also expedite the review of a drug designated as a breakthrough therapy, which is a drug that is intended, alone or in combination with one or more other drugs, to treat a serious or life-threatening disease or condition and preliminary clinical evidence indicates that the drug may demonstrate substantial improvement over existing therapies on one or more clinically significant endpoints, such as substantial treatment effects observed early in clinical development. A sponsor may request the FDA to designate a drug as a breakthrough therapy at the time of, or any time after, the submission of an IND application for the drug. The designation of a drug as a breakthrough therapy provides the same benefits as are available under the Fast Track program, as well as intensive FDA guidance on the product's development program. If the FDA designates a drug as a breakthrough therapy, it must take actions appropriate to expedite the development and review of the application, which may include holding meetings with the sponsor and the review team throughout the development of the drug; providing timely advice to, and interactive communication with, the sponsor regarding the development of the drug to ensure that the development program to gather the nonclinical and clinical data necessary for approval is as efficient as practicable; involving senior managers and experienced review staff, as appropriate, in a collaborative, cross-disciplinary review; assigning a cross-disciplinary project lead for the FDA review team to facilitate an efficient review of the development program and to serve as a scientific liaison between the review team and the sponsor; and taking steps to ensure that the design of the clinical trials is as efficient as practicable, when scientifically appropriate, such as by minimizing the number of patients exposed to a potentially less efficacious treatment. Entinostat was recently granted Breakthrough Therapy designation by the FDA based on our completed randomized Phase 2b clinical trial in ER+ locally recurrent or metastatic breast cancer comparing entinostat and exemestane versus placebo and exemestane. This trial showed a modest but statistically

significant improvement in the entinostat and exemestane arm for PFS, the primary endpoint. A statistically significant improvement was also observed for overall survival, an exploratory endpoint. No difference was observed in objective response rates. The FDA may rescind a Breakthrough Therapy designation in the future if further clinical development later shows that the criteria for designation are no longer met.

Fast Track designation, priority review, accelerated approval and Breakthrough Therapy designation do not change the standards for approval, but may expedite the development or review process.

Hatch-Waxman Act

Under the Drug Price Competition and Patent Term Restoration Act of 1984, known as the "Hatch-Waxman Act," Congress created an abbreviated FDA review process for generic versions of approved pioneer (brand name) NDA products. In considering whether to approve such a generic drug product submitted under an Abbreviated New Drug Application, or ANDA, the FDA generally requires that an ANDA applicant demonstrate that the proposed generic drug product's active ingredient, strength, dosage form, and route of administration are the same as that of the reference product, that the two drugs are bioequivalent, that any impurities in the proposed product do not affect the product's safety or effectiveness, and that its manufacturing processes and methods ensure the consistent potency and purity of its proposed product. Similarly, section 505(b)(2) of the Federal Food, Drug, and Cosmetic Act provides a reduced burden of demonstrating safety and effectiveness for an NDA for a product that is similar, but not identical, to the pioneer product.

The Hatch Waxman Act requires NDA applicants and NDA holders to provide certain information about patents related to the drug for listing in its publication Approved Drug Products with Therapeutic Equivalence Evaluations, referred to as the Orange Book. ANDA and 505(b)(2) applicants who seek to reference a pioneer drug must then certify regarding each of the patents listed with the FDA for the reference product. A certification that a listed patent is invalid or will not be infringed by the marketing of the applicant's product is called a "Paragraph IV certification."

The Hatch Waxman Act also provides periods of regulatory exclusivity for certain pioneer products during which FDA review or approval of an ANDA or 505(b)(2) application is precluded. If the pioneer product is a New Chemical Entity, or NCE, the FDA is precluded for a period of five years from accepting for review an ANDA or 505(b)(2) application for the same chemical entity. Under NCE exclusivity, the FDA may accept an ANDA or 505(b)(2) application for review after four years, however, if that application contains a Paragraph IV certification challenging one of the pioneer's listed patents.

The Hatch Waxman Act also provides three years of exclusivity for applications containing the results of new clinical investigations (other than bioavailability studies) essential to the FDA's approval of new uses of approved products, such as new indications, dosage forms, strengths, or conditions of use. During this three-year exclusivity period, the FDA may review but not approve an ANDA or 505(b)(2) application for a product with the same conditions of use as supported by those new clinical investigations. This exclusivity will not necessarily prohibit the FDA from accepting or approving ANDAs or 505(b)(2) applications for other products containing the same active ingredient.

If an ANDA or 505(b)(2) application containing a Paragraph IV certification is accepted for filing by the FDA, the applicant must within 20 days provide notice to the NDA holder and patent

owner that the application has been submitted and provide the factual and legal basis for the applicant's opinion that the patent is invalid or not infringed. The NDA holder or patent owner may then file suit against the ANDA or 505(b)(2) applicant for patent infringement. If a suit is filed within 45 days of receiving notice of the Paragraph IV certification, the FDA is precluded from approving the ANDA or 505(b)(2) application for a period of 30 months. The 30-month stay generally begins on the date of the receipt of notice by the NDA holder or patent owner. If the pioneer product has NCE exclusivity and the pioneer files suit against the ANDA or 505(b)(2) application during the fifth year of exclusivity, however, the 30-month stay will not be triggered until five years from the date of the reference drug's approval. The FDA may approve the proposed product before the expiration of the 30-month stay if a court finds the patent invalid or not infringed or if the court shortens the period because the parties have failed to cooperate in expediting the litigation.

FDA Post-Approval Requirements

Any products manufactured or distributed by us pursuant to FDA approvals are subject to continuing regulation by the FDA, including requirements for record-keeping and reporting of adverse experiences with the drug. Drug manufacturers are required to register their facilities with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with cGMPs, which impose certain quality processes, manufacturing controls and documentation requirements upon us and our third-party manufacturers in order to ensure that the product is safe, has the identity and strength, and meets the quality and purity characteristics that it purports to have. The FDA and certain states also impose requirements on manufacturers and distributors to establish the pedigree of product in the chain of distribution, including some states that require manufacturers and others to adopt new technology capable of tracking and tracing product as it moves through the distribution chain. We cannot be certain that we or our present or future suppliers will be able to comply with the cGMP and other FDA regulatory requirements. If our present or future suppliers are not able to comply with these requirements, the FDA may halt our clinical trials, fail to approve any NDA or other application, shut down manufacturing operations or withdraw approval of the NDA for that drug, or we may recall the drug from distribution. Noncompliance with cGMP or other requirements can result in issuance of warning letters, civil and criminal penalties, seizures and injunctive action.

The FDA closely regulates the labeling, marketing and promotion of drugs. While doctors are free to prescribe any drug approved by the FDA for any use, a company can only make claims relating to safety and efficacy of a drug that are consistent with FDA approval, and the company is allowed to actively market a drug only for the particular use and treatment approved by the FDA. In addition, any claims we make for our products in advertising or promotion must be appropriately balanced with important safety information and otherwise be adequately substantiated. Failure to comply with these requirements can result in adverse publicity, warning letters, corrective advertising, injunctions and potential civil and criminal penalties. Government regulators recently have increased their scrutiny of the promotion and marketing of drugs.

Coverage and Reimbursement

In both domestic and foreign markets, sales of any products for which we may receive regulatory approval will depend in part upon the availability of coverage and adequate reimbursement to healthcare providers from third-party payors. Such third-party payors include government health programs, such as Medicare and Medicaid, managed care providers, private health insurers and other organizations. Coverage decisions may depend upon clinical and

economic standards that disfavor new drug products when more established or lower cost therapeutic alternatives are available. Assuming coverage is granted, the reimbursement rates paid for covered products might not be adequate. Even if favorable coverage status and adequate reimbursement rates are attained, less favorable coverage policies and reimbursement rates may be implemented in the future. The marketability of any products for which we may receive regulatory approval for commercial sale may suffer if the government and other third-party payors fail to provide coverage and adequate reimbursement to allow us to sell such products on a competitive and profitable basis. For example, under these circumstances, physicians may limit how much or under what circumstances they will prescribe or administer such products, and patients may decline to purchase them. This, in turn, could affect our ability to successfully commercialize our products and impact our profitability, results of operations, financial condition, and future success.

In the United States, the European Union and other potentially significant markets for our product candidates, government authorities and third party payors are increasingly attempting to limit or regulate the price of medical products and services, particularly for new and innovative products and therapies. Such pressure, along with the increased emphasis on managed healthcare in the United States and on country and regional pricing and reimbursement controls in the European Union, will likely put additional downward pressure on product pricing, reimbursement and usage, which may adversely affect our future product sales and results of operations. These pressures can arise from rules and practices of managed care groups, judicial decisions, governmental laws and regulations related to government healthcare programs, healthcare reform, and pharmaceutical coverage and reimbursement policies.

The market for any product candidates for which we may receive regulatory approval will depend significantly on the degree to which these products are listed on third-party payors' drug formularies, or lists of medications for which third-party payors provide coverage and reimbursement to the extent products for which we may receive regulatory approval are covered under a pharmacy benefit or are otherwise subject to a formulary. The industry competition to be included on such formularies often leads to downward pricing pressures on pharmaceutical companies. Also, third-party payors may refuse to include a particular branded drug on their formularies or otherwise restrict patient access to a branded drug when a less costly generic equivalent or other alternative is available. In addition, because each third-party payor individually approves coverage and reimbursement levels, obtaining coverage and adequate reimbursement is a time-consuming and costly process. We may be required to provide scientific and clinical support for the use of any product to each third-party payor separately with no assurance that approval would be obtained, and we may need to conduct expensive pharmacoeconomic studies in order to demonstrate the cost-effectiveness of our products. We cannot be certain that our product candidates will be considered cost-effective. This process could delay the market acceptance of any product candidates for which we may receive approval and could have a negative effect on our future revenues and operating results.

Federal and State Fraud and Abuse and Data Privacy and Security Laws and Regulations

In addition to FDA restrictions on marketing of pharmaceutical products, federal and state fraud and abuse laws restrict business practices in the pharmaceutical industry. These laws include anti-kickback and false claims laws and regulations as well as data privacy and security laws and regulations. The federal Anti-Kickback Statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration to induce or in return for purchasing, leasing, ordering or arranging for or recommending the purchase, lease or order of any item or service reimbursable under Medicare, Medicaid or other federal healthcare programs. The term "remuneration" has been broadly interpreted to include

anything of value. The Anti-Kickback Statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on one hand and prescribers, purchasers and formulary managers on the other. Although there are a number of statutory exemptions and regulatory safe harbors protecting some common activities from prosecution, the exemptions and safe harbors are drawn narrowly. Practices that involve remuneration that may be alleged to be intended to induce prescribing, purchases or recommendations may be subject to scrutiny if they do not qualify for an exemption or safe harbor. Several courts have interpreted the statute's intent requirement to mean that if any one purpose of an arrangement involving remuneration is to induce referrals of federal healthcare covered business, the statute has been violated.

The reach of the Anti-Kickback Statute was also broadened by the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act of 2010, or collectively the Affordable Care Act, which, among other things, amended the intent requirement of the federal Anti-Kickback Statute such that a person or entity no longer needs to have actual knowledge of this statute or specific intent to violate it in order to have committed a violation. In addition, the Affordable Care Act provides that the government may assert that a claim including items or services resulting from a violation of the federal Anti-Kickback Statute constitutes a false or fraudulent claim for purposes of the civil False Claims Act or the civil monetary penalties statute, which imposes penalties against any person who is determined to have presented or caused to be presented a claim to a federal health program that the person knows or should know is for an item or service that was not provided as claimed or is false or fraudulent.

The federal False Claims Act prohibits any person from knowingly presenting, or causing to be presented, a false claim for payment to the federal government or knowingly making, using or causing to be made or used a false record or statement material to a false or fraudulent claim to the federal government. A claim includes "any request or demand" for money or property presented to the U.S. government. Several pharmaceutical and other healthcare companies have been prosecuted under these laws for allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. Other companies have been prosecuted for causing false claims to be submitted because of the companies' marketing of products for unapproved, and thus non-reimbursable, uses. In addition, the federal Health Insurance Portability and Accountability Act of 1996, or HIPAA, created federal criminal laws that prohibit knowingly and willfully executing a scheme to defraud any healthcare benefit program, including private third party payors, and knowingly and willfully falsifying, concealing or covering up a material fact or making any materially false, fictitious or fraudulent statement in connection with the delivery of or payment for healthcare benefits, items or services. Also, many states have similar fraud and abuse statutes or regulations, including, without limitation, laws analogous to the federal Anti-Kickback Statute and the federal False Claims Act, that apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor.

In addition, we may be subject to data privacy and security regulation by both the federal government and the states in which we conduct our business. HIPAA, as amended and supplemented by the Health Information Technology and Clinical Health Act, or HITECH, and their respective implementing regulations, including the final omnibus rule effective on March 26, 2013, imposes specified requirements relating to the privacy, security and transmission of certain individually identifiable health information. Among other things, HITECH and the omnibus rule make portions of HIPAA's privacy and security standards directly applicable to "business associates," defined as independent contractors of covered entities that create, receive, maintain or transmit protected health information in connection with providing

a service or activity for or on behalf of a covered entity. HITECH also increased the civil and criminal penalties that may be imposed against covered entities, business associates and possibly other persons, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce HIPAA and seek attorney's fees and costs associated with pursuing federal civil actions. Even if we are not directly subject to HIPAA, we could be subject to criminal penalties if we knowingly obtain or disclose individually identifiable health information maintained by a HIPAA covered entity in a manner not authorized or permitted by HIPAA. In addition, state laws govern the privacy and security of health information in certain circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts. We may also be subject to state data security breach notification laws and federal and state consumer protection laws, all of which govern the use and disclosure of personal information.

Because of the breadth of these laws and the narrowness of available statutory and regulatory exemptions, it is possible that some of our business activities could be subject to challenge, investigation or legal action under one or more of such laws. If our operations are found to be in violation of any of the federal and state laws described above or any other governmental regulations that apply to us, we may be subject to significant civil, criminal, and administrative penalties, including, without limitation, damages, fines, imprisonment, exclusion from participation in government healthcare programs, and the curtailment or restructuring of our operations, any of which could adversely affect our ability to operate our business and our results of operations. To the extent that any of our product candidates receive approval and are sold in a foreign country, we may be subject to similar foreign laws and regulations, which may include, for instance, applicable post-marketing requirements, including safety surveillance, anti-fraud and abuse laws, and implementation of corporate compliance programs and reporting of payments or transfers of value to healthcare professionals.

Healthcare Reform

In the United States and some foreign jurisdictions, there have been a number of legislative and regulatory changes and proposed changes regarding the healthcare system that could prevent or delay marketing approval of our product candidates, restrict or regulate post-approval activities and affect our ability to profitably sell any product candidates for which we obtain marketing approval. Among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and expanding access. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives. In March 2010, the President signed into law the Affordable Care Act, which substantially changes the way healthcare will be financed by both governmental and private insurers, and significantly impacts the pharmaceutical industry. Among the provisions of the Affordable Care Act of importance to our business, including, without limitation, our ability to commercialize, and the prices we may obtain for, any of our product candidates that are approved for sale, are the following:

- an annual, nondeductible fee on any entity that manufactures or imports branded prescription drugs and biologic agents, apportioned among these entities according to their sales of branded prescription drugs under certain government healthcare programs such as Medicare and Medicaid;
- increases in the statutory minimum rebates a manufacturer must pay as a condition to having covered drugs available for payment under the Medicare Part B and Medicaid programs;

- expansion of healthcare fraud and abuse laws, including the federal False Claims Act and the federal Anti-Kickback Statute, and the addition of new government investigative powers and enhanced penalties for non-compliance;
- extension of a manufacturer's Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- a Medicare Part D coverage gap discount program, under which a participating manufacturer must agree to offer 50% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D;
- expansion of eligibility criteria for Medicaid programs by, among other things, allowing states to offer Medicaid coverage to additional individuals and by adding new eligibility categories for certain individuals with income at or below 133% of the federal poverty level beginning in 2014;
- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program;
- the new requirements under the federal Open Payments program, which requires manufacturers of drugs, devices, biologics and medical supplies for which payment is available under Medicare, Medicaid or the Children's Health Insurance Program (with certain exceptions) to report annually to the U.S. Department of Health and Human Services information related to "payments or other transfers of value" made to physicians (defined to include doctors, dentists, optometrists, podiatrists and chiropractors) and teaching hospitals. Applicable manufacturers and applicable group purchasing organizations must also report annually to the U.S. Department of Health and Human Services ownership and investment interests held by physicians (as defined above) and their immediate family members. Data collection for these reporting requirements is required beginning on August 1, 2013, manufacturers are required to submit reports to the U.S. Department of Health and Human Services by March 31, 2014 and the 90th day of each subsequent calendar year, and disclosure of such information will be made by the U.S. Department of Health and Human Services on a publicly available website beginning in September 2014;
- a new requirement to annually report drug samples that manufacturers and distributors provide to physicians; and
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research.

The Affordable Care Act also establishes an Independent Payment Advisory Board, or IPAB, to reduce the per capita rate of growth in Medicare spending. Beginning in 2014, IPAB is mandated to propose recommendations to reduce the rate of Medicare spending growth if it is determined that the rate of growth of Medicare expenditures exceeds target growth rates. The IPAB has broad discretion to propose policies to reduce expenditures, which may have a negative impact on payment rates for medical products and services. A proposal made by the IPAB is required to be implemented by the U.S. government's Centers for Medicare and Medicaid Services unless Congress adopts a proposal with savings greater than those proposed by the IPAB. IPAB proposals may impact payments for physician and free-standing services, among other things, beginning in 2015 and for hospital services beginning in 2020.

In addition, other legislative changes have been proposed and adopted since the Affordable Care Act was enacted. These changes include aggregate reductions to Medicare payments to

providers of up to 2% per fiscal year, which went into effect in April 2013. In January 2013, President Obama signed into law the American Taxpayer Relief Act of 2012, which, among other things, reduced Medicare payments to several types of providers and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. The full impact on our business of the Affordable Care Act and other new laws is uncertain but may result in additional reductions in Medicare and other healthcare funding. Nor is it clear whether other legislative changes will be adopted, if any, or how such changes would affect the demand for our drugs once commercialized.

Foreign Regulations

In addition to regulations in the United States, we will be subject to a variety of foreign regulations governing clinical trials and commercial sales and distribution of our product candidates to the extent we choose to sell any products outside of the United States. Whether or not we obtain FDA approval for a product, we must obtain approval of a product by the comparable regulatory authorities of foreign countries before we can commence clinical trials or marketing of the product in those countries. The approval process varies from country to country and the time may be longer or shorter than that required for FDA approval. For example, based on scientific advice from the European Medicines Agency, or the EMA, we believe our current clinical development plan is likely to be insufficient to receive regulatory approval in Europe. During the next year, we plan to work with the EMA to formulate a development plan that may be more acceptable, but may be unsuccessful in doing so or such plan may not be feasible. The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from country to country. As in the United States, post-approval regulatory requirements, such as those regarding product manufacture, marketing, or distribution would apply to any product that is approved outside the United States.

Other Regulations

We are also subject to numerous federal, state and local laws relating to such matters as safe working conditions, manufacturing practices, environmental protection, fire hazard control, and disposal of hazardous or potentially hazardous substances. We may incur significant costs to comply with such laws and regulations now or in the future.

Employees

As of August 28, 2014, we had 13 full-time employees and one part-time employee. Of the full-time employees, six were primarily engaged in research and development activities and two have an M.D. or Ph.D. degree. None of our employees is represented by labor unions or covered by collective bargaining agreements. We consider our relationship with our employees to be good.

Facilities

Our headquarters is currently located in Waltham, Massachusetts, and consists of 4,712 square feet of leased office space under a lease that expires on April 30, 2017.

Legal Proceedings

We are not currently subject to any material legal proceedings.

MANAGEMENT

Directors, Executive Officers, Key Employee and Key Consultant

The following table sets forth the name, age and position of each of our directors, executive officers, key employee and key consultant as of August 28, 2014.

Name	Age	Position
Directors		
Dennis G. Podlesak[2]	56	Chairman of the Board of Directors
Fabrice Egros, Ph.D.[1]	52	Director
Luke Evnin, Ph.D.[2][3]	51	Director
Kim P. Kamdar, Ph.D.[3]	47	Director
Ivor Royston, M.D.[3]	69	Director
Richard P. Shea[1]	62	Director
George W. Sledge Jr., M.D.[1][2]	62	Director
Executive Officers		
Arlene M. Morris	62	President, Chief Executive Officer and Director
John S. Pallies	50	Chief Financial Officer and Treasurer
Robert S. Goodenow, Ph.D.	63	Chief Business Officer and Secretary
Peter Ordentlich, Ph.D.	45	Chief Technology Officer
Key Employee		
Caryn L. Peterson	55	Vice President, Regulatory Affairs
Key Consultant		
Pamela M. Klein, M.D.	52	Chief Medical Officer and Special Advisor to the Chief Executive Officer

(1) Member of the audit committee.
(2) Member of the compensation committee.
(3) Member of the nominating and corporate governance committee.

The following includes a brief biography for each of our directors, executive officers, key employee and key consultant, with each director biography including information regarding the experiences, qualifications, attributes or skills that caused our board of directors to determine that each member of our board of directors should serve as a director as of the date of this prospectus. There are no family relationships among any of our directors, executive officers, key employee or key consultant.

Directors

Dennis G. Podlesak has served as chairman of our board of directors since December 2008. Since November 2007, Mr. Podlesak has served as a partner at Domain Associates, LLC, a life science-focused venture capital firm. While at Domain, Mr. Podlesak was a founder and the Chief Executive Officer of Calixa Therapeutics, Inc., a privately held biopharmaceutical company, which was acquired by Cubist Pharmaceuticals, Inc. in December 2009. Mr. Podlesak was also the executive chairman of Corthera, Inc., a privately held biopharmaceutical company, which was acquired by Novartis AG in January 2010. Prior to joining Domain, from 2005 to 2007, Mr. Podlesak served as the Chief Executive Officer and a member of the board of directors of Cerexa, Inc., a privately held biotechnology company, which became a wholly owned subsidiary of Forest Laboratories, Inc. after being acquired by Forest in January 2007. From 2004 to 2005, Mr. Podlesak served as the Chief Executive Officer of Peninsula Pharmaceuticals Inc., a privately

held pharmaceutical company, and in June 2005, he led the sale of Peninsula to Johnson & Johnson. Prior to joining Peninsula, Mr. Podlesak held various management and executive positions at Novartis AG, a publicly traded healthcare company, and Allergan, Inc., a publicly traded healthcare company. Mr. Podlesak serves on a number of public and private company boards, including Regado Biosciences, Inc., a publicly traded biotechnology company, and Avanir Pharmaceuticals, Inc., a publicly traded biopharmaceutical company. Mr. Podlesak received a B.A. and an M.B.A. from Pepperdine University, and has completed postgraduate studies at the Wharton School, University of Pennsylvania. We believe that Mr. Podlesak's experience in the venture capital industry, his experience as the Chief Executive Officer at other successful companies in the biotechnology industry, his over 20 years of strategic, operational and commercial experience in the pharmaceutical industry, and his service as a director of other publicly traded and privately held life science companies give him the qualifications, skills and financial expertise to serve on our board of directors.

Fabrice Egros, Ph.D. has served as a member of our board of directors since September 2013. Since November 2012, Dr. Egros has served as the Deputy Chief Executive Officer/Chief Operating Officer of NovaMedica LLC, a privately held pharmaceutical company, and has been its Chief Operating Officer and a member of its board of directors since July 2012. From February 2011 to July 2012, Dr. Egros served as the Chief Operating Officer of Xanodyne Pharmaceuticals, Inc., a privately held pharmaceutical company. From September 2009 to February 2011, he served as the Senior Vice President, Corporate Business Development and Strategy of UCB, S.A., a publicly traded biopharmaceutical company. From August 2006 to August 2009, Dr. Egros served as the President of UCB, Inc., a subsidiary of UCB, S.A., and from September 2003 to August 2006, he served as the President of UCB Japan Co. Ltd., a subsidiary of UCB, S.A. Prior to joining UCB, Dr. Egros held various management and executive positions at Parke-Davis, Warner Lambert Company, a privately held pharmaceutical company, and Sanofi, formerly known as Sanofi-Aventis, a publicly traded pharmaceutical company. Dr. Egros received a B.S. in Pharmacokinetics and Metabolism from Schiller International University and a Pharm.D. and Ph.D. in Pharmaceutical Sciences from Chatenay Malabry University, and has participated in the Advanced Management Program at Harvard University. We believe that Dr. Egros's experience as an executive officer of other successful companies in the pharmaceutical industry gives him the qualifications, skills and financial expertise to serve on our board of directors.

Luke Evnin, Ph.D. has served as a member of our board of directors since May 2012. Dr. Evnin has served as a managing director at MPM Capital, a healthcare-focused venture capital firm, since he co-founded MPM's asset management business in 1997. Prior to joining MPM, Dr. Evnin spent seven years at Accel Partners, a venture capital firm, including four years as general partner. Dr. Evnin is currently a member of the board of directors of EnteroMedics Inc., a publicly traded medical devices company. Dr. Evnin received an A.B. in Molecular Biology from Princeton University and a Ph.D. in Biochemistry from the University of California, San Francisco. We believe that Dr. Evnin's experience in the venture capital industry, and his service as a director of other publicly traded and privately held life science companies give him the qualifications, skills and financial expertise to serve on our board of directors.

Kim P. Kamdar, Ph.D. has served as a member of our board of directors since September 2006. Dr. Kamdar joined Domain Associates, LLC, a life science-focused venture capital firm, in January 2005 and has served as a partner at Domain since January 2011. Prior to joining Domain, Dr. Kamdar spent two years as a Kauffman Fellow with MPM Capital, a healthcare-focused venture capital firm. She also served as a research director at Novartis AG, a publicly traded healthcare company, and founded Aryzun Pharmaceuticals, Inc., a privately held biotechnology company. Dr. Kamdar received a B.A. from Northwestern University and a Ph.D.

from Emory University. We believe that Dr. Kamdar's experience in the venture capital industry, and her service as a director of privately held life science companies give her the qualifications, skills and financial expertise to serve on our board of directors.

Ivor Royston, M.D. has served as a member of our board of directors since September 2013. In 1993, Dr. Royston founded Forward Ventures, a life science-focused venture capital firm, where he has served as a managing member. Prior to founding Forward Ventures, Dr. Royston spent 10 years as the founding President and Chief Executive Officer of the Sidney Kimmel Cancer Center, a non-profit organization, and 12 years on the faculty of the medical school and cancer center at the University of California, San Diego. Dr. Royston also co-founded IDEC Corporation, which merged with Biogen, Inc. to form Biogen Idec, Inc., a publicly traded biotechnology company, and Hybritech, Inc.. Dr. Royston has served on a number of public and private company boards, and is currently a member of the board of directors of MMRGlobal, Inc., a publicly traded health record company. Dr. Royston received a B.A. in Human Biology and an M.D. from Johns Hopkins University, and has completed post-doctoral training in Internal Medicine and Medical Oncology at Stanford University. We believe that Dr. Royston's experience in the venture capital industry, his experience co-founding other successful companies in the pharmaceutical industry, and his service as a director of other publicly traded and privately held life science companies give him the qualifications, skills and financial expertise to serve on our board of directors.

Richard P. Shea has served as a member of our board of directors since January 2014. Since July 2007, Mr. Shea has served as Senior Vice President and Chief Financial Officer of Momenta Pharmaceuticals, Inc., a publicly traded biotechnology company, and has been its Vice President and Chief Financial Officer since October 2003. Prior to joining Momenta, he served as Chief Operating Officer and Chief Financial Officer of Variagenics, Inc., a publicly traded pharmacogenomics company, that was merged with Hyseq Pharmaceuticals, Inc., and as Vice President, Finance of Genetics Institute, Inc., a publicly traded biotechnology company, which was acquired by Wyeth, which was then acquired by Pfizer, Inc. Mr. Shea is a certified public accountant and received an A.B. from Princeton University and an M.B.A. from the Public Management Program at Boston University. We believe that Mr. Shea's experience as an executive officer of other successful companies in the pharmaceutical industry gives him the qualifications, skills and financial expertise to serve on our board of directors.

George W. Sledge Jr., M.D. has served as a member of our board of directors since January 2014. Since January 2013, Dr. Sledge has been Professor and Chief of Medical Oncology at Stanford University Medical Center. Dr. Sledge served as a Co-director of the breast cancer program at the Indiana University Simon Cancer Center from 1989 to 2012, and was a Professor of Medicine and Pathology at the Indiana University School of Medicine from 1994 to 2013. From 2010 to 2011, Dr. Sledge served as the President of the American Society of Clinical Oncology, a professional organization representing oncologists. Dr. Sledge is currently Editor-in-Chief of the journal *Clinical Breast Cancer*, and has served as a member of the External Advisory Committee for The Cancer Genome Atlas project, chairman of the Breast Committee of the Eastern Cooperative Oncology Group, chairman of the Education Committee of the American Society of Clinical Oncology, a member of the Department of Defense Breast Cancer Research Program's Integration Panel, and a member of the Food and Drug Administration's Oncology Drug Advisory Committee. Dr. Sledge received a B.A. from the University of Wisconsin and an M.D. from Tulane University. We believe that Dr. Sledge's experience in the study and treatment of breast cancer and new drug development, his regulatory experience, and his experience as an executive officer of a professional organization gives him the qualifications, skills and financial expertise to serve on our board of directors.

Executive Officers

Arlene M. Morris has served as our President since September 2013, our Chief Executive Officer since March 2012 and a member of our board of directors since May 2011. From 2003 to January 2011, Ms. Morris served as the President and Chief Executive Officer of Affymax, Inc., a publicly traded biotechnology company. Ms. Morris has also held various management and executive positions at Clearview Projects, Inc., a corporate advisory firm, Coulter Pharmaceutical, Inc., a publicly traded pharmaceutical company, Scios Inc., a publicly traded biopharmaceutical company, and Johnson & Johnson, a publicly traded healthcare company. She is also currently a member of the board of directors of Neovacs, SA, a publicly traded biotechnology company. Ms. Morris received a B.A. in Biology and Chemistry from Carlow College. We believe that Ms. Morris's experience as an executive officer of other successful companies in the pharmaceutical industry, and her service as a director of other publicly traded and privately held life science companies give her the qualifications, skills and financial expertise to serve on our board of directors.

John S. Pallies has served as our Chief Financial Officer since November 2013 and our Treasurer since November 2010. Mr. Pallies previously served as our Vice President, Finance and Administration from January 2012 to October 2013, our Executive Director of Finance and Controller from January 2011 to December 2011, and our Controller and Director of Finance from October 2007 to December 2010. Prior to joining us, Mr. Pallies served as the Controller and Director of Finance at Cerimon Pharmaceuticals, Inc., a privately held biopharmaceutical company, and as Director of Financial Operations at Akamai Technologies, a publicly traded high-technology company. Mr. Pallies was also a management consultant at Arthur Anderson LLP. Mr. Pallies received a B.S. in Marketing from Boston College and an M.B.A. from The Carroll School of Management at Boston College.

Robert S. Goodenow, Ph.D. has served as our Secretary since November 2010 and our Chief Business Officer since March 2007. Prior to joining us, Dr. Goodenow spent seven years as the Vice President of Corporate Development at Inovio Biomedical Corporation, formerly known as Inovio Pharmaceuticals, Inc., a publicly traded pharmaceutical company. He also held various management and executive positions at Aventis, a publicly traded pharmaceutical company, which was acquired by Sanofi S.A., and Baxter International Inc., a publicly traded healthcare company. Dr. Goodenow received a B.A in Biochemistry from the University of California, Berkeley and a Ph.D. in Biophysics from Stanford University, and has completed postdoctoral training at California Institute of Technology in Biology.

Peter Ordentlich, Ph.D. co-founded the company in October 2005 and has served as our Chief Technology Officer since November 2013. Dr. Ordentlich previously served as our Vice President, Translational Medicine from January 2012 to October 2013, our Executive Director, Translational Science from January 2011 to December 2011, and our Director, Scientific Affairs and Strategic Alliances from January 2008 to December 2010. Prior to founding the company, Dr. Ordentlich was a scientist at the Salk Institute for Biological Studies, a biological research non-profit organization. He also spent five years as a research scientist at X-Ceptor Therapeutics, Inc., a drug discovery company, which was acquired by Exelixis, Inc. Dr. Ordentlich received a B.A. in Biochemistry and a Ph.D. in Immunology from the University of Pennsylvania.

Key Employee

Caryn L. Peterson has served as our Vice President, Regulatory Affairs since March 2010. She has also served as the Chief Executive Officer of Alevium Pharmaceuticals, Inc., a privately held biotechnology company, since June 2009. Prior to joining Alevium, Ms. Peterson served as

Vice President, Regulatory Affairs at Ascenta Therapeutics, Inc., and FeRx Incorporated, both privately held biopharmaceutical companies, and as Associate Director of Regulatory Affairs at Amylin Pharmaceuticals, Inc., a publicly traded pharmaceutical company, which was recently acquired by Bristol-Myers Squibb Company. She is also a founder and general partner of DSC-Associates, a pharmaceutical consulting group.

Key Consulant

Pamela M. Klein, M.D. has served as our Chief Medical Officer and Special Advisor to our Chief Executive Officer since February 2014 and as a consultant since April 2008. Since January 2008, Dr. Klein has served as Principal of PMK BioResearch, a consulting firm offering strategic consulting to all stages of biotechnology companies and venture capital firms. From November 2008 to March 2011, Dr. Klein served as the Chief Medical Officer of Intellikine, Inc., a privately held pharmaceutical company, which was acquired by Takeda Pharmaceutical Company Limited in December 2011. Prior to joining Intellikine, Dr. Klein held various positions of increasing responsibility at Genentech, Inc., most recently as Vice President, Development. Prior to Genentech, she spent seven years at the National Cancer Institute. Dr. Klein received a B.A. in Cell and Molecular Biology from California State University, Northridge and an M.D. from Loyola University's Stritch School of Medicine.

Composition of the Board of Directors

Our amended and restated bylaws provide that the size of our board of directors will be determined from time to time by resolution of our board of directors. Our board of directors currently consists of eight directors, seven of whom qualify as independent directors under the rules and regulations of the Securities and Exchange Commission, or SEC, and NASDAQ Stock Market, LLC, or NASDAQ.

Election of Directors

Immediately prior to the completion of this offering, our amended and restated certificate of incorporation will provide for a classified board of directors consisting of three classes of directors. We will have two directors in Class I and three directors in each of Class II and Class III, each serving a staggered three-year term. At each annual meeting of stockholders, our stockholders will elect successors to directors whose terms then expire to serve from the time of election and qualification until the third annual meeting following election. After the completion of this offering, our directors will be divided among the three classes as follows:

- Class I directors will be Drs. Egros and Kamdar, and their terms will expire at the annual meeting of stockholders to be held in 2015;
- Class II directors will be Drs. Evnin, Sledge and Royston, and their terms will expire at the annual meeting of stockholders to be held in 2016; and
- Class III directors will be Ms. Morris and Messrs. Podlesak and Shea, and their terms will expire at the annual meeting of stockholders to be held in 2017.

The classification of our board of directors may have the effect of delaying or preventing changes in control of our company. We expect that additional directorships resulting from an increase in the number of directors, if any, will be distributed among the three classes so that, as nearly as possible, each class will consist of one-third of the directors.

Independence of the Board of Directors and Board Committees

Rule 5605 of the NASDAQ Marketplace Rules, or the NASDAQ Listing Rules, requires that independent directors compose a majority of a listed company's board of directors. In addition, the NASDAQ Listing Rules require that, subject to specified exceptions, each member of a listed company's audit, compensation, and nominating and corporate governance committees be independent and that audit committee members also satisfy independence criteria set forth in Rule 10A-3 under the Exchange Act of 1934, as amended, or the Exchange Act. Under NASDAQ Listing Rule 5605(a)(2), a director will only qualify as an "independent director" if, in the opinion of our board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. In order to be considered independent for purposes of Rule 10A-3 under the Exchange Act, a member of an audit committee of a listed company may not, other than in his or her capacity as a member of the audit committee, the board of directors or any other board committee: (1) accept, directly or indirectly, any consulting, advisory or other compensatory fee from the listed company or any of its subsidiaries; or (2) be an affiliated person of the listed company or any of its subsidiaries. In addition to satisfying general independence requirements under the NASDAQ Listing Rules, members of the compensation committee must also satisfy additional independence requirements set forth in NASDAQ Listing Rule 5605(d)(2). In order to be considered independent for purposes of NASDAQ Listing Rule 5605(d)(2), a member of a compensation committee of a listed company may not, other than in his or her capacity as a member of the compensation committee, the board of directors or any other board committee, accept, directly or indirectly, any consulting, advisory or other compensatory fee from the listed company or any of its subsidiaries. Additionally, the board of directors of the listed company must consider whether the compensation committee member is an affiliated person of the listed company or any of its subsidiaries and, if so, must determine whether such affiliation would impair the director's judgment as a member of the compensation committee.

In January 2013, our board of directors undertook a review of the composition of our board of directors and its committees and the independence of each director. Based upon information requested from and provided by each director concerning his or her background, employment and affiliations, including family and other relationships, including those relationships described under "Certain Relationships and Related Party Transactions," our board of directors determined that none of our directors other than Ms. Morris has a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each of these directors is "independent" as that term is defined under Rule 5605(a)(2) of the NASDAQ Listing Rules. Ms. Morris is not considered independent because she currently serves as our President and Chief Executive Officer. Our board of directors also determined that each member of the audit, compensation, and nominating and corporate governance committees satisfies the independence standards for such committees established by the SEC and the NASDAQ Listing Rules, as applicable. In making these determinations on the independence of our directors, our board of directors considered the relationships that each such non-employee director has with our company and all other facts and circumstances our board of directors deemed relevant in determining independence, including the beneficial ownership of our capital stock by each non-employee director.

Board Leadership Structure and the Role of the Board in Risk Oversight

Board Leadership Structure

The positions of our chairman of the board and Chief Executive Officer are separated. Separating these positions allows our Chief Executive Officer to focus on our day-to-day business, while allowing the chairman of the board to lead our board of directors in its

fundamental role of providing advice to and independent oversight of management. Our board of directors recognizes the time, effort and energy that the Chief Executive Officer must devote to her position in the current business environment, as well as the commitment required to serve as our chairman, particularly as our board of directors' oversight responsibilities continue to grow. Our board of directors also believes that this structure ensures a greater role for the independent directors in the oversight of the company and active participation of the independent directors in setting agendas and establishing priorities and procedures for the work of our board of directors.

Although our amended and restated bylaws that will be in effect immediately prior to the completion of this offering will not require that we separate the chairman of the board and Chief Executive Officer positions, our board of directors believes that having separate positions is the appropriate leadership structure for us at this time. Our board recognizes that depending on the circumstances, other leadership models, such as combining the role of chairman of the board with the role of Chief Executive Officer, might be appropriate. Accordingly, our board may periodically review its leadership structure. Our board of directors believes its administration of its risk oversight function has not affected its leadership structure.

Our independent directors will meet alone in executive session at least quarterly each year. The purpose of these executive sessions is to promote open and candid discussion among the independent directors.

Role of the Board in Risk Oversight

We face a number of risks, including those described under the caption "Risk Factors" contained elsewhere in this prospectus. Our board of directors believes that risk management is an important part of establishing, updating and executing on the company's business strategy. Our board of directors, as a whole and at the committee level, has oversight responsibility relating to risks that could affect the corporate strategy, business objectives, compliance, operations, and the financial condition and performance of the company. Our board of directors focuses its oversight on the most significant risks facing the company and on its processes to identify, prioritize, assess, manage and mitigate those risks. Our board of directors and its committees receive regular reports from members of the company's senior management on areas of material risk to the company, including strategic, operational, financial, legal and regulatory risks. While our board of directors has an oversight role, management is principally tasked with direct responsibility for management and assessment of risks and the implementation of processes and controls to mitigate their effects on the company.

The audit committee, as part of its responsibilities, oversees the company's significant financial and operational risk exposures, including but not limited to accounting matters, liquidity and credit risks, corporate tax positions, insurance coverage, and cash investment strategy and results. The audit committee is also responsible for overseeing the management of risks relating to the performance of the company's internal audit function (if required) and its independent registered accounting firm, as well as the company's systems of internal controls and disclosure controls and procedures. The compensation committee is responsible for overseeing the company's major compensation-related risk exposures, including risks related to executive compensation and overall compensation and benefit strategies, plans, arrangements, practices and policies. The nominating and corporate governance committee oversees the company's major legal compliance risk exposures, including the company's procedures and any related policies with respect to risk assessment and risk management. These committees provide regular reports to the full board of directors.

Committees of the Board

Our board of directors has a standing audit committee, compensation committee and nominating and corporate governance committee. The composition and responsibilities of each committee are described below. Members serve on these committees until their resignation or until otherwise determined by our board.

Audit Committee

The audit committee is responsible for assisting our board of directors in its oversight of the integrity of our financial statements, the qualifications and independence of our independent auditors, and our internal financial and accounting controls. The audit committee has direct responsibility for the appointment, compensation, retention (including termination) and oversight of our independent auditors, and our independent auditors report directly to the audit committee. The audit committee also prepares the audit committee report that the SEC requires to be included in our annual proxy statement.

The members of the audit committee are Mr. Shea and Drs. Egros and Sledge, and Mr. Shea serves as chair of the audit committee. Each member of the audit committee qualifies as an independent director under the corporate governance standards of the NASDAQ Listing Rules and the independence requirements of Rule 10A-3 of the Exchange Act. Our board of directors has determined that Mr. Shea qualifies as an “audit committee financial expert” as such term is currently defined in Item 407(d)(5) of Regulation S-K. The audit committee has adopted a written charter that satisfies the applicable standards of the SEC and the NASDAQ Listing Rules, which we will post on our website upon completion of this offering.

Compensation Committee

The compensation committee approves the compensation objectives for the company, approves the compensation of the Chief Executive Officer and approves or recommends to our board of directors for approval the compensation for other executives. The compensation committee reviews all compensation components, including base salary, bonus, benefits and other perquisites.

The members of the compensation committee are Drs. Evnin and Sledge and Mr. Podlesak, and Dr. Evnin serves as chair of the compensation committee. Each member of the compensation committee is a non-employee director within the meaning of Rule 16b-3 of the rules promulgated under the Exchange Act and an outside director as defined by Section 162(m) of the U.S. Internal Revenue Code of 1986, as amended, or the Code, and each is an independent director as defined by the NASDAQ Listing Rules, including NASDAQ Listing Rule 5605(d)(2). The compensation committee has adopted a written charter that satisfies the applicable standards of the SEC and the NASDAQ Listing Rules, which we will post on our website upon completion of this offering.

Nominating and Corporate Governance Committee

The nominating and corporate governance committee is responsible for making recommendations to our board of directors regarding candidates for directorships and the structure and composition of our board and the board committees. In addition, the nominating and corporate governance committee is responsible for developing and recommending to our board corporate governance guidelines applicable to the company and advising our board on corporate governance matters.

The members of the nominating and corporate governance committee are Drs. Evnin, Kamdar and Royston, and Dr. Kamdar serves as chair of the nominating and corporate governance committee. Each member of the nominating and corporate governance committee is a non-employee director within the meaning of Rule 16b-3 of the rules promulgated under the Exchange Act, and each is an independent director as defined by the NASDAQ Listing Rules. The nominating and corporate governance committee has adopted a written charter that satisfies the applicable standards of the NASDAQ Listing Rules, which we will post on our website upon completion of this offering.

Code of Business Conduct and Ethics

We adopted a code of business conduct and ethics that applies to all of our employees, officers and directors including those officers responsible for financial reporting. Upon completion of this offering, we will post the code of business conduct and ethics on our website. We intend to disclose future amendments to the code or any waivers of its requirements on our website to the extent permitted by the applicable rules and exchange requirements.

Compensation Committee Interlocks and Insider Participation

None of the members of our compensation committee has ever been an officer or employee of the company. None of our executive officers serves, or has served during the last three years, as a member of the board of directors, compensation committee or other board committee performing equivalent functions of any entity that has one or more executive officers serving as one of our directors or on our compensation committee.

EXECUTIVE AND DIRECTOR COMPENSATION

Executive Compensation

Summary Compensation Table

The following table sets forth information for each of the last two completed fiscal years regarding compensation awarded to or earned by our named executive officers.

Name and Principal Position	Year	Salary ($)	Bonus[1] ($)	Option Awards[2] ($)	Other[3] ($)	Total ($)
Arlene M. Morris	2013	409,487	177,984	1,857,195	22,692	2,467,358
President and Chief Executive Officer	2012	306,945	—	180,107	71,993	559,045
Robert S. Goodenow, Ph.D.	2013	322,150	69,103	540,446	13,738	945,437
Chief Business Officer and Secretary	2012	304,229	—	—	61,721	365,950
John S. Pallies	2013	231,066	48,257	289,662	7,925	576,910
Chief Financial Officer and Treasurer	2012	212,451	—	—	32,257	244,708

(1) Amounts reflect amounts earned in 2013, which were paid during 2014, based on the achievement of company and individual performance goals and other factors deemed relevant by our board of directors and compensation committee. For 2013, the compensation committee determined that Dr. Goodenow and Mr. Pallies were each entitled to approximately 108% of his target bonus. The compensation committee recommended that Ms. Morris receive 108% of her target bonus, which our board of directors approved.

(2) Amounts reflect the grant date fair value of option awards determined in accordance with ASC 718. For information regarding assumptions underlying the value of equity awards, see note 13 to our consolidated financial statements and the discussion under "Management's Discussion and Analysis of Financial Condition and Results of Operations – Critical Accounting Policies – Stock-Based Compensation," included elsewhere in this prospectus. These amounts do not correspond to the actual value that the named executive officer may realize upon exercise of these option awards.

(3) Amounts in 2013 reflect amounts paid for unused accrued vacation time.

Outstanding Equity Awards at Fiscal Year-End

The following table provides information regarding equity awards held by the named executive officers that were outstanding as of December 31, 2013.

	Option Awards[1]			
Name	Number of Securities Underlying Unexercised Options Exercisable (#)	Number of Securities Underlying Unexercised Options Unexercisable (#)	Option Exercise Price ($/Sh)	Option Expiration Date
Arlene M. Morris	39,387[2]	—	$ 14.76	10/8/2023
	285,357[3]	—	$ 2.46	5/9/2023
	2,293[4]	—	$ 38.13	3/27/2022
	922[5]	—	$ 25.83	5/25/2021
Robert S. Goodenow, Ph.D.	13,408[2]	—	$ 14.76	10/8/2023
	87,041[3]	—	$ 2.46	5/9/2023
	1,440[4]	—	$ 17.22	6/29/2020
	4,170[4]	—	$ 14.76	10/22/2018
	5,585[4]	—	$ 12.30	4/23/2017
John S. Pallies	6,704[2]	—	$ 14.76	10/8/2023
	47,382[3]	—	$ 2.46	5/9/2023
	720[4]	—	$ 17.22	6/29/2020
	1,016[4]	—	$ 12.30	12/5/2017

(1) In March 2013, our board of directors implemented a 10-for-1 stock split of our Series A convertible preferred stock in connection with the first tranche of the Series B-1 financing. In order to mitigate the resulting dilution to

common stockholders, the board of directors canceled all unvested stock options of our employees, including our named executive officers, and concurrently granted replacement stock options.

(2) 25% of this option vested on September 20, 2013, the vesting commencement date, and the remainder has vested or will vest in equal monthly installments over a three-year period of continuous service following the vesting commencement date. This option is immediately exercisable. Shares of common stock issued upon exercise of an unvested option that has been "early exercised" are subject to the company's right of repurchase within 90 days of termination of employment.

(3) 25% of this option vested on May 9, 2013, the grant date, and the remainder has vested or will vest in equal monthly installments over a three-year period of continuous service following the grant date. This option is immediately exercisable. Shares of common stock issued upon exercise of an unvested option that has been "early exercised" are subject to the company's right of repurchase within 90 days of termination of employment.

(4) 25% of this option vested on the one-year anniversary of the vesting commencement date, and the remainder has vested or will vest in equal monthly installments over a three-year period of continuous service following the one-year anniversary of the vesting commencement date This option is immediately exercisable. Shares of common stock issued upon exercise of an unvested option that has been "early exercised" are subject to the company's right of repurchase within 90 days of termination of employment.

(5) This option vests in equal monthly installments over a four-year period of continuous service following the grant date. This option is immediately exercisable. Shares of common stock issued upon exercise of an unvested option that has been "early exercised" are subject to the company's right of repurchase within 90 days of termination of employment.

Employment Agreements

We have entered into new employment agreements, or the employment agreements, with each of our named executive officers that become effective on the date of effectiveness of the registration statement of which this prospectus is a part. The following is a description of each of the employment agreements.

Arlene M. Morris. Ms. Morris's employment agreement provides for her at-will employment as our Chief Executive Officer. Effective as of January 1, 2014, Ms. Morris's annual base salary is $424,360, and may be increased or decreased from time to time based on the review of our compensation committee. Ms. Morris's employment agreement further provides that she is eligible to earn an annual target performance bonus of up to 40% of her annual base salary upon attainment of objectives to be determined by our board of directors or our compensation committee. Effective upon the consummation of this offering, our board of directors and compensation committee has approved the increase of Ms. Morris's annual base salary to $430,000 and set the maximum target performance bonus for which she may be eligible for 2014 at up to 50% of her annual base salary.

Pursuant to her employment agreement, Ms. Morris is entitled to reimbursement for all necessary and reasonable business expenses incurred in connection with her duties in accordance with our generally applicable policies. Additionally, we have agreed to reimburse, or pay for, all reasonable expenses incurred by Ms. Morris in connection with commuting between our Boston and South Carolina offices, including Ms. Morris's actual and reasonable living expenses incurred in the Boston area and her actual and reasonable commuting expenses incurred between Boston and her current principal residence, up to a maximum of $10,000 per month.

Ms. Morris's employment agreement further provides that in the event her employment is terminated without "cause," as defined in her employment agreement, or she terminates her employment for "good reason," as defined in her employment agreement, she is entitled to (i) a lump sum severance payment equal to 12 months base salary, (ii) payment on her behalf of up to 12 months of benefits continuation and (iii) with respect to equity awards granted to Ms. Morris prior to the date of the effectiveness of the registration statement of which this prospectus is a part, accelerated vesting and the lapse of any reacquisition or repurchase rights we hold with respect to such equity awards for the portion of such equity awards that would have otherwise vested within the 12-month period following the date of Ms. Morris's

termination of employment without cause or for good reason were she to remain employed with us during such 12-month period.

If Ms. Morris's employment is terminated without cause or she terminates her employment for good reason within three months prior to or 12 months after a "change in control" of us, as defined in her employment agreement, she is instead entitled to (a) a lump sum severance payment equal to the sum of 18 months base salary and 150% of the greater of (1) the average annual target performance bonus paid to her for the preceding three years or (2) her annual target performance bonus in effect as of the change in control, (b) payment on her behalf of up to 12 months of benefits continuation and (c) full accelerated vesting on all of her unvested options and the lapse of any reacquisition or repurchase rights we hold with respect to any other equity award granted to her pursuant to any of our equity incentive plans.

Additionally, Ms. Morris's employment agreement provides that with respect to equity awards granted to Ms. Morris prior to the date of the effectiveness of the registration statement of which this prospectus is a part, upon a change of control of us, all such equity awards are subject to accelerated vesting to the extent they are then unvested options and the lapse of any reacquisition or repurchase rights we hold with respect to such equity awards.

Robert S. Goodenow, Ph.D. Dr. Goodenow's employment agreement provides for his at-will employment as our Chief Business Officer. Effective as of January 1, 2014, Dr. Goodenow's annual base salary is $329,518, and may be increased or decreased from time to time based on the review of our compensation committee. Dr. Goodenow's employment agreement further provides that he is eligible to earn an annual target performance bonus of up to 20% of his annual base salary upon attainment of objectives to be determined by our board of directors or our compensation committee. Dr. Goodenow also is entitled to reimbursement for all necessary and reasonable business expenses incurred in connection with his duties in accordance with our generally applicable policies. Effective upon the consummation of this offering, our board of directors and compensation committee has set the maximum target performance bonus for which Dr. Goodenow may be eligible for 2014 at up to 35% of his annual base salary.

Dr. Goodenow's employment agreement further provides that in the event his employment is terminated without "cause," as defined in his employment agreement, or he terminates his employment for "good reason," as defined in his employment agreement, he is entitled to (i) a lump sum severance payment equal to six months base salary and (ii) payment on his behalf of up to 12 months of benefits continuation. If Dr. Goodenow's employment is terminated without cause or he terminates his employment for good reason within three months prior to or 12 months after a "change in control" of us, as defined in his employment agreement, he is instead entitled to (a) a lump sum severance payment equal to the sum of 12 months base salary and 100% of the greater of (1) the average annual target performance bonus paid to him for the preceding three years or (2) his annual target performance bonus in effect as of the change in control, (b) payment on his behalf of up to 12 months of benefits continuation and (c) full accelerated vesting on all of his unvested options and the lapse of any reacquisition or repurchase rights we hold with respect to any other equity award granted to him pursuant to any of our equity incentive plans.

John S. Pallies. Mr. Pallies's employment agreement provides for his at-will employment as our Chief Financial Officer. Effective as of January 1, 2014, Mr. Pallies's annual base salary is $267,800, and may be increased or decreased from time to time based on the review of our compensation committee. Mr. Pallies's employment agreement further provides that he is eligible to earn an annual target performance bonus of up to 20% of his annual base salary upon attainment of objectives to be determined by our board of directors or our compensation

committee. Mr. Pallies also is entitled to reimbursement for all necessary and reasonable business expenses incurred in connection with his duties in accordance with our generally applicable policies. Effective upon the consummation of this offering, our board of directors and compensation committee has approved the increase of Mr. Pallies's annual base salary to $273,000 and set the maximum target performance bonus for which he may be eligible for 2014 at up to 35% of his annual base salary.

Mr. Pallies's employment agreement further provides that in the event his employment is terminated without "cause," as defined in his employment agreement, or he terminates his employment for "good reason," as defined in his employment agreement, he is entitled to (i) a lump sum severance payment equal to six months base salary and (ii) payment on his behalf of up to 12 months of benefits continuation. If Mr. Pallies's employment is terminated without cause or he terminates his employment for good reason within three months prior to or 12 months after a "change in control" of us, as defined in his employment agreement, he is instead entitled to (a) a lump sum severance payment equal to the sum of 12 months base salary and 100% of the greater of (1) the average annual target performance bonus paid to him for the preceding three years or (2) his annual target performance bonus in effect as of the change in control, (b) payment on his behalf of up to 12 months of benefits continuation and (c) full accelerated vesting on all of his unvested options and the lapse of any reacquisition or repurchase rights we hold with respect to any other equity award granted to him pursuant to any of our equity incentive plans.

In addition, the employment agreements provide that in the event the severance and other benefits provided for or otherwise payable to the executive constitute "parachute payments" within the meaning of Section 280G of the Code and are subject to the excise tax imposed by Section 4999 of the Code, we will pay either (i) the executive's severance benefits under the employment agreement in full or (ii) only a part of the executive's severance benefits under the employment agreement such that the executive receives the largest payment possible without the imposition of the excise tax, in each case, depending upon which alternative would result in the executive receiving the greater net after-tax payment.

Other Benefits

Our named executive officers are eligible to participate in all of our employee benefit plans, such as medical, dental, vision, group life, short and long-term disability, and our 401(k) plan, in each case on the same basis as other employees, subject to applicable laws. We also provide vacation and other paid holidays to all employees, including our named executive officers.

We believe these benefits are important to attracting and retaining experienced executives. Like many private companies, we do not currently provide perquisites to our executive officers, given our attention to the cost-benefit tradeoff of such benefits, and the board of directors' knowledge of the benefit offerings at other private companies.

Tax and Accounting Considerations

Section 162(m) of the Code generally disallows a tax deduction for compensation in excess of $1.0 million paid to our Chief Executive Officer and our three other most highly paid executive officers other than our principal financial officer. Qualifying performance-based compensation is not subject to the deduction limitation if specified requirements are met. We generally intend to structure the performance-based portion of our executive compensation, when feasible, to comply with exemptions in Section 162(m) so that the compensation remains tax deductible to us. However, our board of directors may, in its judgment, authorize

compensation payments that do not comply with the exemptions in Section 162(m) when it believes that such payments are appropriate to attract and retain executive talent.

The compensation committee also takes into account whether components of our compensation program may be subject to the penalty tax associated with Section 409A of the Code, and aims to structure the elements of compensation to be compliant with or exempt from Section 409A to avoid such potential adverse tax consequences.

In addition, we account for equity compensation paid to our employees in accordance with ASC 718, which requires us to estimate and record an expense over the service period of the award. We record cash compensation as an expense at the time the obligation is accrued. The accounting impact of our compensation programs is one of many factors that we consider in determining the size and structure of our programs.

Equity Benefit Plans

2013 Omnibus Incentive Plan

Our board of directors adopted the 2013 Plan in November 2013, and our stockholders approved the 2013 Plan in June 2014. We believe adoption and maintenance of the 2013 Plan helps us attract and retain executive officers, other employees and service providers, as well as our non-employee directors. We believe that awarding grants to our executive officers and others will stimulate their efforts toward our continued success, long-term growth and profitability. The 2013 Plan provides for the grant of stock options, stock appreciation rights, restricted stock, unrestricted stock, stock units, dividend equivalent rights, other equity-based awards and cash bonus awards. We have reserved 2,000,000 shares of common stock (which includes 72,280 shares reserved for issuance under our 2007 Plan as of June 30, 2014) for issuance pursuant to the 2013 Plan, subject to certain adjustments set forth in the 2013 Plan. Any shares of common stock related to awards outstanding under the 2007 Plan upon completion of this offering, which thereafter terminate by expiration, forfeiture, cancellation or otherwise without the issuance of such shares will be added to, and included in, the 2013 Plan reserve amount. In addition, effective January 1, 2015 and continuing until the expiration of the 2013 Plan, the number of shares of common stock available for issuance under the 2013 Plan will automatically increase annually by 4% of the total number of issued and outstanding shares of our common stock as of December 31 of the immediately preceding year, or such lesser number of shares (which may be zero) as determined in the discretion of our board of directors by action taken prior to the beginning of that calendar year. This summary is qualified in its entirety by the detailed provisions of the 2013 Plan, which is filed as an exhibit to the registration statement of which this prospectus is a part.

Section 162(m) of the Code limits publicly held companies to an annual deduction for U.S. federal income tax purposes of $1,000,000 for compensation paid to each of their Chief Executive Officer and their three highest compensated executive officers (other than the Chief Executive Officer and the principal financial officer) determined at the end of each year, who are referred to as covered employees. However, certain performance-based compensation is excluded from this limitation. The 2013 Plan is designed to permit the compensation committee to grant awards that qualify as performance-based compensation for purposes of satisfying the conditions of Section 162(m) of the Code, but the 2013 Plan does not require that awards qualify for this exemption.

Administration of the 2013 Plan. Our compensation committee will administer the 2013 Plan and determine all terms of awards under the plan. Each member of our compensation

committee who administers the plan will be both a “non-employee director” within the meaning of Rule 16b-3 of the Exchange Act, and an “outside director” within the meaning of Section 162(m) of the Code. Our compensation committee will also determine who will receive awards under the plan, the type of award and its terms and conditions and the number of shares of our common stock subject to the award, if the award is equity-based. Our compensation committee will also interpret the provisions of the plan. During any period of time in which we do not have a compensation committee, our board of directors or another committee appointed by our board of directors will administer the plan. References below to the compensation committee include a reference to the board of directors or another committee appointed by the board of directors for those periods in which the board of directors or such other committee appointed by the board of directors is acting.

Eligibility. All of our employees and the employees of our affiliates are eligible to receive awards under the 2013 Plan. In addition, our non-employee directors and consultants and advisors who perform services for us and our affiliates may receive awards under the 2013 Plan, other than incentive stock options.

Share Authorization. We have reserved 2,000,000 shares of common stock for issuance under the 2013 Plan, which includes all shares of common stock that remain available for issuance under the 2007 Plan as of the completion of this offering. In connection with stock splits, dividends, recapitalizations and certain other events, our board of directors will make proportionate adjustments that it deems appropriate in the aggregate number of shares of common stock that we may issue under the 2013 Plan and the terms of outstanding awards. If any shares of stock covered by an award granted under the 2013 Plan or the 2007 Plan are not purchased or are forfeited or expire, or if an award otherwise terminates without delivery of any shares of stock subject thereto, or is settled in cash in lieu of shares of stock, then the number of shares of stock counted against the aggregate number of shares of stock available under the 2013 Plan with respect to such award will again be available for making awards under the plan.

During any time that the transition period under Section 162(m) of the Code has expired or does not apply, the maximum number of shares of common stock subject to options or stock appreciation rights that we can issue under the 2013 Plan to any person in any single calendar year is 400,000. The maximum number of shares of common stock that we can issue under the 2013 Plan to any person other than pursuant to an option or stock appreciation right in any single calendar year is 200,000. The maximum amount that any one person may earn as an annual incentive award or other cash award in any calendar year is $1,000,000 and the maximum amount that any one person may earn as a performance award or other cash award in respect of a performance period is $3,000,000.

Options. The 2013 Plan authorizes our compensation committee to grant incentive stock options (under Section 421 of the Code) and options that do not qualify as incentive stock options, or non-qualified stock options. All shares of stock available for issuance under the 2013 Plan will be available for issuance pursuant to incentive stock options. The compensation committee will determine the exercise price of each option, provided that the price will be equal to at least the fair market value of the shares of common stock on the date on which the option is granted. If we were to grant incentive stock options to any 10% stockholder, the exercise price may not be less than 110% of the fair market value of our shares of common stock on the date of grant.

The term of an option cannot exceed 10 years from the date of grant. If we were to grant incentive stock options to any 10% stockholder, the term cannot exceed five years from the date of grant. The compensation committee determines at what time or times each option may be

exercised and the period of time, if any, after retirement, death, disability or termination of employment during which options may be exercised. Options may be made exercisable in installments. The compensation committee may accelerate the exercisability of options. The compensation committee may not, without stockholder approval, reduce the exercise price of an option after the grant of the option, cancel an outstanding option in exchange for or substitution of a new option having an exercise price below that of the option that was surrendered, or cancel an outstanding option with an exercise price above the current share price in exchange for cash or other securities.

The aggregate fair market value, determined at the time of grant, of our common stock with respect to incentive stock options that are exercisable for the first time by an optionee during any calendar year under all of our stock plans may not exceed $100,000. We will generally treat options or portions thereof that exceed such limit as non-qualified stock options.

Stock Appreciation Rights. The 2013 Plan authorizes our compensation committee to grant stock appreciation rights that provide the recipient with the right to receive, upon exercise of the stock appreciation right, cash, shares of common stock or a combination of the two. The amount that the recipient will receive upon exercise of the stock appreciation right generally will equal the excess of the fair market value of our common stock on the date of exercise over the shares' fair market value on the date of grant. Stock appreciation rights will become exercisable in accordance with terms determined by our compensation committee. Stock appreciation rights may be granted in tandem with an option grant or independently from an option grant. The term of a stock appreciation right cannot exceed 10 years from the date of grant.

Stock Awards. The 2013 Plan also provides for the grant of stock awards (which includes restricted stock and unrestricted stock). A stock award is an award of shares of common stock that may be subject to restrictions on transferability and other restrictions as our compensation committee determines in its sole discretion on the date of grant. The restrictions, if any, may lapse over a specified period of time or through the satisfaction of conditions, in installments or otherwise, as our compensation committee may determine. A participant who receives a restricted stock award will have all of the rights of a stockholder as to those shares, including the right to vote and the right to receive dividends or distributions on the shares, except that the board of directors may require any dividends to be reinvested in shares. During the period, if any, when stock awards are non-transferable or forfeitable, a participant is prohibited from selling, transferring, assigning, pledging or otherwise encumbering or disposing of his or her award shares.

Stock Units. The 2013 Plan also authorizes our compensation committee to grant stock units. Stock units represent the participant's right to receive a compensation amount, based on the value of the shares of common stock, if vesting criteria established by the compensation committee are met. If the vesting criteria are met, we will pay stock units in cash, shares of common stock or a combination of the two.

Bonuses. Under the 2013 Plan, we may provide for performance-based bonuses payable in cash upon the attainment of performance goals that the compensation committee establishes relate to one or more performance criteria described in the plan. Like other performance-based awards, cash performance bonuses, for which there is no minimum payout, must be based upon objectively determinable bonus formulas established in accordance with the plan, as determined by the compensation committee.

Dividend Equivalents. Our compensation committee may grant dividend equivalents in connection with the grant of any equity-based award other than options and appreciation rights.

Dividend equivalents may be paid currently or may be deemed to be reinvested in additional shares of stock, which may thereafter accrue additional equivalents, and may be payable in cash, shares of common stock or a combination of the two. Our compensation committee will determine the terms of any dividend equivalents.

Performance awards. The 2013 Plan permits the grant of performance-based stock and cash awards that may qualify as performance-based compensation not subject to the $1,000,000 limitation on the income tax deductibility of compensation paid to a covered employee imposed by Section 162(m) of the Code. Under the 2013 Plan, our compensation committee may structure such awards so that stock is issued or cash is paid pursuant to such award only upon achievement of the performance goals set by our compensation committee at the beginning of the designated performance period.

We may select performance goals based on one or more of the following measures: (1) net earnings or net income; (2) operating earnings; (3) pretax earnings; (4) earnings per share of stock; (5) stock price, including growth measures and total stockholder return; (6) earnings before interest and taxes; (7) earnings before interest, taxes, depreciation and/or amortization; (8) sales or revenue growth, whether in general, by type of product or service, or by type of customer; (9) gross or operating margins; (10) return measures, including return on assets, capital, investment, equity, sales or revenue; (11) cash flow, including operating cash flow, free cash flow, cash flow return on equity and cash flow return on investment; (12) productivity ratios; (13) expense targets; (14) market share; (15) financial ratios as provided in credit agreements of the company and its subsidiaries; (16) working capital targets; (17) completion of acquisitions of business or companies; (18) completion of divestitures and asset sales; (19) revenues under management; (20) funds from operations; (21) successful implementation of clinical trials, including components thereof; and (22) any combination of any of the foregoing business criteria.

We may base performance goals on a company-wide basis, with respect to one or more business units, divisions, affiliates or business segments, and in either absolute terms or relative to the performance of one or more comparable companies or the performance of one or more relevant indices. We may not adjust upward any awards that we intend to qualify as performance-based compensation. The plan administrator retains the discretion to adjust performance-based awards downward, either on a formula or discretionary basis, or any combination as the compensation committee determines. Performance goals may differ from participant to participant and from award to award.

Other Equity-Based Awards. Our compensation committee may grant other types of equity-based awards under the 2013 Plan. Other equity-based awards may be payable in cash, shares of common stock or other equity, or a combination thereof, and may be restricted or unrestricted, as determined by our compensation committee. The terms and conditions that apply to other equity-based awards are determined by the compensation committee.

Change in Control. If we experience a change in control in which outstanding equity-based awards will not be assumed or continued by the surviving entity, unless otherwise provided in an award agreement, all restricted shares, stock units and dividend equivalents will vest, and the underlying shares will be delivered immediately before the change in control. In addition, all options and stock appreciation rights will become exercisable 15 days before the change in control and terminate upon the consummation of the change in control, or, in the discretion of our board of directors, all options, stock appreciation rights, restricted shares and stock units may be canceled before the change in control in exchange for payment of any amount in cash or securities having a value (as determined by our board of directors), in the case of restricted

shares or stock units equal to the formula or fixed price per share paid to our stockholders and, in the case of options and stock appreciation rights equal to the product of the number of shares subject to the option or stock appreciation right multiplied by the amount by which the formula or fixed price paid to our stockholders exceeds the exercise price of the option or the stock appreciation right. In the case of performance awards denominated in shares or units, if more than half of the performance period has lapsed, the awards will be converted into shares or units based upon actual performance achieved to date. If less than half of the performance period has lapsed, or if we cannot determine actual performance, the awards will be converted into shares or units assuming target performance has been achieved.

Amendment; Termination. Our board of directors may amend or terminate the 2013 Plan at any time; provided that no amendment may adversely impair the rights of participants with outstanding awards. Our stockholders must approve any amendment if such approval is required under applicable law or NASDAQ Listing Rules. Unless terminated sooner by our board of directors or extended with stockholder approval, the 2013 Plan will terminate on the 10th anniversary of the date on which our stockholders approved the 2013 Plan.

2007 Stock Plan

General. In January 2007, our board of directors and our stockholders adopted our 2007 Plan. Our 2007 Plan was most recently amended by our board of directors on January 17, 2014, which amendment was approved by our stockholders on January 23, 2014. Our board of directors administers the 2007 Plan. Our board of directors has determined not to grant any additional awards under the 2007 Plan after the completion of this offering. However, the 2007 Plan will continue to govern the terms and conditions of the outstanding awards granted under the 2007 Plan which, as of June 30, 2014, constitute stock options to purchase 923,874 shares of our common stock.

Share Reserve. As of June 30, 2014, a total of 1,002,172 shares of our common stock had been authorized for issuance under the 2007 Plan. As of June 30, 2014, options to purchase a total of 923,874 shares of our common stock were issued and outstanding, a total of 6,018 shares of our common stock had been issued upon the exercise of options or pursuant to other awards granted under the 2007 Plan, and 72,280 shares remained available for future grant. Such remaining share balance will become available for issuance under the 2013 Plan upon completion of this offering.

Types of Awards. Our 2007 Plan provides for the grant of incentive stock options, non-statutory stock options and stock purchase rights to our employees, directors and consultants. Our 2007 Plan provides for the grant of incentive stock options, within the meaning of Section 422 of the Code, only to our employees or any of our “parent corporations” or “subsidiary corporations” (as such terms are defined in Sections 424(e) and (f) of the Code). Our board of directors has the authority to determine the terms and conditions of the awards granted under the 2007 Plan.

Our 2007 Plan does not allow for the transfer of option awards or stock purchase rights other than by will or the laws of descent and distribution, and only the recipient of an award or a permitted transferee may exercise such award during his or her lifetime. Our board of directors, however, may in its discretion grant non-statutory stock options that may be transferred by instrument to an inter vivos or testamentary trust, or by gift or to an immediate family member.

Corporate Transaction. Our 2007 Plan provides that in the event of our merger with or into another corporation, or a sale of all or substantially all of our assets, the successor corporation

or its parent or subsidiary may assume or substitute for each outstanding award. If the outstanding awards are not assumed or substituted, such awards will terminate upon the consummation of the transaction.

2013 Employee Stock Purchase Plan

Our board of directors adopted the ESPP in November 2013, and our stockholders approved the ESPP in June 2014. The ESPP will become effective upon completion of this offering. The purpose of the ESPP is to enable our eligible employees, through payroll deductions or cash contributions, to purchase shares of our common stock, to increase our employees' interest in our growth and success and encourage employees to remain in our employment.

We have reserved 131,000 shares of common stock for purchase by our eligible employees. In addition, effective January 1, 2015 and continuing until the expiration of the ESPP, the number of shares of common stock available for purchase by our eligible employees under the ESPP will automatically increase annually on January 1, in an amount equal to the lesser of (i) 1% of the total number of issued and outstanding shares of our common stock as of December 31 of the immediately preceding year, or (ii) 200,000 shares of our common stock, except that our board of directors may act prior to January 1 of any calendar year to provide for an increase of a lesser number of shares (which may be zero). In the event there is any change in the number of outstanding shares of our common stock, or the shares of common stock are changed into or exchanged for a different number or type of shares without receipt of consideration by us (for instance, by a recapitalization or stock split), we will proportionately adjust the number or type of shares that the eligible employees may purchase under the ESPP. The shares of common stock issuable under the ESPP may, in the discretion of our board of directors, be authorized but unissued shares, treasury shares or shares purchased on the open market. This summary is qualified in its entirety by the detailed provisions of the ESPP, which is filed as an exhibit to the registration statement of which this prospectus is a part.

Offering Periods and Optional Purchase Periods. Our compensation committee will determine the length and duration of the periods during which payroll deductions or other cash payments will accumulate to purchase shares of common stock, which period will not exceed 27 months. Each of these periods is known as an offering period.

Our compensation committee may, but is not required to, permit periodic purchases of common stock within a single offering period. The periods during which payroll deductions or other cash payments will accumulate for these purchases are referred to as purchase periods. We expect that each offering period will consist of a single purchase period for six months. No offering periods have been approved at this time.

Administration of the ESPP. Our compensation committee will administer the ESPP. Each member of our compensation committee that administers the ESPP will be both a "non-employee director" within the meaning of Rule 16b-3 of the Exchange Act, and an "outside director" within the meaning of Section 162(m) of the Code. Our compensation committee will also interpret the provisions of the ESPP, prescribe, amend and rescind rules relating to it, and make all other determinations necessary or advisable in administering the ESPP, all of which determinations will be final and binding. During any period of time in which we do not have a compensation committee, another committee appointed by our board of directors will administer the ESPP. References to our compensation committee include a reference to any other committee appointed by our board of directors for those periods in which such other committee appointed by our board of directors is acting.

Eligibility. Any of our employees may participate in the ESPP, except: (i) an employee whose customary employment is less than 20 hours per week; and (ii) an employee who, after exercising his or her rights to purchase common stock under the ESPP, would own shares of common stock (including shares that may be acquired under any outstanding options) representing 5% or more of the total combined voting power of all classes of our capital stock. An employee must be employed, as determined under the ESPP and applicable guidance, on the last trading day of the purchase period, or a purchase date, to acquire common stock under the ESPP, unless the employee has died prior to such time.

Participation Election. An eligible employee may participate in the ESPP by completing and submitting to us an election form to participate. Such election will authorize us to make payroll deductions on each pay day following enrollment in the ESPP, or if authorized by our compensation committee, participating employees may provide other cash contributions. Our compensation committee will credit the deductions or contributions to the employee's account under the ESPP. Subject to certain exceptions, an employee may not during any offering period change his or her percentage of payroll deduction or contribution for that offering period, nor may an employee withdraw any contributed funds. A participating employee may decrease his or her rate of contribution once during a purchase period, or change his or her rate of contribution to take effect on the first day of the next offering period, by delivering to us a new election form to participate in the ESPP. A participating employee may terminate payroll deductions or contributions at any time prior to a purchase date.

Purchase Price. Rights to purchase shares of our common stock will be deemed granted to participating employees as of the first trading day of each offering period. Our compensation committee will determine the purchase price for each share, or the purchase price. The purchase price for an offering period may not be less than 85% of the fair market value of our common stock on the first trading day of the offering period or the purchase date, whichever is lower, and in no event may the purchase price be less than the par value of our common stock.

Purchase Limit. No employee may purchase shares of our common stock in any offering period or in any calendar year under the ESPP and all other "employee stock purchase plans" of the company having an aggregate fair market value in excess of $25,000, determined as of the first trading date of the offering period. Prior to the start of an offering period, our compensation committee, in its discretion, may impose an additional limit on the number or value of shares of common stock an employee may purchase during the offering period. We expect that participating employees will be able to contribute between 1% and 15% of their earnings during an offering period.

Purchase of Common Stock. On each purchase date, a participating employee will be credited with the number of whole shares of common stock purchased under the ESPP during such purchase period. Shares of common stock purchased under the ESPP will be held in the custody of an agent designated by our board of directors. The agent may hold such shares in stock certificates in nominee names and may commingle shares held in its custody in a single account or in stock certificates without identification as to individual participating employees. Subject to any additional restrictions imposed by our compensation committee, in its discretion, a participating employee may, at any time following his or her purchase of shares of common stock under the ESPP, instruct the agent to have all or part of such shares reissued in the employee's own name and have the stock certificate delivered to the employee. Our compensation committee may impose a holding period requirement of up to two years from the date participating employees purchase shares of common stock under the ESPP.

If in any purchase period the number of unsold shares that may be made available for purchase under the ESPP is insufficient to permit eligible employees to exercise their rights to

purchase shares, our compensation committee will make a participation adjustment and proportionately reduce the number of shares purchasable by all participating employees. Our compensation committee will refund to a participating employee any funds then remaining in his or her account after such exercise.

Authorized Leave of Absence or Disability. Our compensation committee may suspend payroll deductions for a participating employee who remains an eligible employee during any period of absence of the employee from work due to an authorized leave of absence or disability or, if the employee so elects, he or she may continue to pay periodic cash contributions to the ESPP. If such participating employee returns to active service prior to a purchase date, our compensation committee will resume the employee's payroll deductions. If such employee did not pay periodic cash contributions during the employee's period of absence, the employee may elect to either: (i) make up any deficiency in his or her account resulting from a suspension of payroll deductions by an immediate cash payment; (ii) not make up such deficiency in his or her account, in which event the number of shares to be purchased by the employee will be reduced to the number of whole shares that may be purchased with the amount, if any, credited to the employee's account on the purchase date, plus the aggregate amount, if any, of all payroll deductions to be made thereafter; or (iii) withdraw the amount in his or her account and terminate his or her option to purchase.

Termination of Participation. Our compensation committee will terminate a participating employee's participation in the ESPP and refund all monies in his or her account if: (i) our board of directors terminates the ESPP; or (ii) the employee ceases to be eligible to participate in the ESPP. In the event a participating employee's employment terminates, or is deemed terminated, for any reason other than death, the amount in the employee's account will be distributed and his or her option to purchase will terminate.

If a participating employee terminates participation in the ESPP on account of his or her death, the employee's representative may elect to either: (a) purchase shares of common stock on the purchase date with the amount then credited to the employee's account; or (b) withdraw the amount in his or her account.

Transferability of Shares. No participating employee may transfer or assign his or her rights to purchase shares of common stock under the ESPP, whether voluntarily, by operation of law or otherwise. Any payment of cash or issuance of shares of common stock under the ESPP may be made only to the participating employee (or, in the event of the employee's death, to the employee's estate). During a participating employee's lifetime, only such participating employee may exercise his or her rights to purchase shares of common stock under the ESPP.

Amendment; Termination. Our board of directors may, at any time, amend the ESPP in any respect; provided that without stockholder approval, it may not (i) increase the number of shares that may be made available for purchase under the ESPP, or (ii) change the eligibility requirements for participating in the ESPP. Additionally, our board of directors may not make any amendment to the ESPP that impairs the vested rights of participating employees. Our board of directors may terminate the ESPP at any time and for any reason or for no reason; provided that such termination will not impair any rights of participating employees that have vested at the time of termination. In any event, the ESPP will, without further action of our board of directors, terminate at the earlier of (a) 10 years after the date of adoption of the ESPP, or (b) such time as all shares of common stock that may be made available for purchase under the ESPP have been issued.

Reorganizations. Upon our dissolution or liquidation, or upon a merger, consolidation or reorganization of the company with one or more other corporations in which we are not the

surviving entity, or upon a sale of all or substantially all of our assets or any other transaction approved by our board of directors resulting in any person or entity owning more than 50% of the combined voting power of all classes of our capital stock, the ESPP and all rights outstanding thereunder will terminate, except to the extent provision is made in writing in connection with such transaction for the continuation or assumption of the ESPP, or for the substitution of the rights under the ESPP with new rights covering the stock of the successor entity. Upon termination of the ESPP in this circumstance, the offering period and the purchase period will end on the last trading day prior to such termination, and the rights of each participating employee shall be automatically exercised on such last trading day.

401(k) Retirement Plan

We maintain a defined contribution retirement plan for our employees. Our 401(k) plan is intended to qualify as a tax-qualified plan under Section 401 of the Code so that contributions to our 401(k) plan and income earned on such contributions are not taxable to participants until withdrawn or distributed from the 401(k) plan. Our 401(k) plan provides that each participant may contribute up to 100% of his or her pre-tax compensation, up to a statutory limit of $17,500 for 2014. Participants who are at least 50 years old can also make “catch-up” contributions, which in 2013 and 2014 may be up to an additional $5,500 above the statutory limit. Under our 401(k) plan, each employee is fully vested in his or her deferred salary contributions. Employee contributions are held and invested by the plan’s trustee. Our 401(k) plan also permits us to make discretionary and matching contributions, subject to established limits and a vesting schedule. To date, we have not made any discretionary or matching contributions to the plan on behalf of participating employees.

Non-Employee Director Compensation

Cash and Equity Compensation

In November 2013, our board of directors approved a non-employee director compensation policy, which will be effective for all non-employee directors upon the effective date of the registration statement for this offering. Each non-employee director will receive an annual base retainer of $35,000. In addition, our non-employee directors will receive the following cash compensation for board services, as applicable:

- the chairman of the board of directors will receive an additional annual retainer of $35,000;
- each member of our audit, compensation and nominating and corporate governance committees, other than the chairperson, will receive an additional annual retainer of $8,500, $6,500 and $4,000, respectively; and
- each chairperson of our audit, compensation and nominating and corporate governance committees will receive an additional annual retainer of $17,000, $13,000 and $8,000, respectively.

We will pay all amounts in quarterly installments. We will also reimburse each of our directors for their travel expenses incurred in connection with their attendance at board of directors and committee meetings.

In addition, each non-employee director will receive a one-time initial award of options to purchase 16,900 shares of our common stock, which will vest monthly over a four-year period, subject to the director’s continued service on the board of directors. Thereafter, each non-employee director will receive an annual award of options to purchase 8,450 shares of our

common stock, which will vest on the one-year anniversary of the date of grant, subject to the director's continued service on the board of directors.

Director Compensation

No compensation was accrued or paid to our non-employee directors during the year ended December 31, 2013 for their service on our board. Directors who are also our employees receive no additional compensation for their service as directors. As of December 31, 2013, Mr. Podlesak had 11,056 options outstanding. No other non-employee director had options outstanding as of December 31, 2013. On February 4, 2014, our board of directors granted 79,268 options to Mr. Podlesak, 11,652 options to Mr. Shea and 11,652 options to Dr. Sledge. These options vest in equal monthly installments over a four-year period of continuous service following the grant date, and are immediately exercisable.

Limitation of Liability and Indemnification Agreements

Our amended and restated certificate of incorporation and amended and restated bylaws, each to become effective immediately prior to the completion of this offering, provide that we will limit the liability of our directors, and may indemnify our directors and officers, to the maximum extent permitted by the Delaware General Corporation Law, or DGCL. The DGCL provides that directors of a corporation will not be personally liable for monetary damages for breach of their fiduciary duties as directors, except for liability for any:

- breach of their duty of loyalty to the corporation or its stockholders;
- 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
- transaction from which the directors derived an improper personal benefit.

These limitations of liability do not apply to liabilities arising under federal securities laws and do not affect the availability of equitable remedies such as injunctive relief or rescission.

We entered into separate indemnification agreements with our directors and officers in addition to the indemnification provided for in our amended and restated bylaws. These indemnification agreements provide, among other things, that we will indemnify our directors and officers for certain expenses, including damages, judgments, fines, penalties, settlements and costs and attorneys' fees and disbursements, incurred by a director or officer in any claim, action or proceeding arising in his or her capacity as a director or officer of our company or in connection with service at our request for another corporation or entity. The indemnification agreements also provide for procedures that will apply in the event that a director or officer makes a claim for indemnification.

We also maintain a directors' and officers' insurance policy pursuant to which our directors and officers are insured against liability for actions taken in their capacities as directors and officers. We believe that these indemnification provisions and insurance are useful to attract and retain qualified directors and officers.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and amended and restated bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duties. They may also reduce the likelihood of derivative litigation against directors and officers, even though an action, if

successful, might benefit us and our stockholders. A stockholder's investment may be harmed to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that, in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act, and is, therefore, unenforceable. There is no pending litigation or proceeding naming any of our directors or officers as to which indemnification is being sought, nor are we aware of any pending or threatened litigation that may result in claims for indemnification by any director or officer.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

The following is a description of transactions, since January 1, 2011, to which we have been a party or will be a party, in which the amount involved exceeded or will exceed $120,000, and in which any of our executive officers, directors or holders of more than 5% of any class of our voting securities, or an affiliate or immediate family member thereof, had or will have a direct or indirect material interest, other than compensation, termination and change of control arrangements, which are described under “Executive and Director Compensation.” We believe the terms obtained or consideration that we paid or received, as applicable, in connection with the transactions described below were comparable to terms available or the amounts that we would pay or receive, as applicable, in arm’s-length transactions with unrelated third parties.

Bridge Financings

December 2011 Bridge Financing

On December 20, 2011, we entered into a bridge loan financing, or the December 2011 bridge financing, in which we issued (i) convertible promissory notes, or the December 2011 notes, for (a) an aggregate principal amount of $2.5 million on December 20, 2011, (b) an aggregate principal amount of $0.4 million on December 28, 2011, (c) an aggregate principal amount of $2.9 million on April 2, 2012 and (d) an aggregate principal amount of $3.0 million on June 28, 2012, and (ii) warrants, or the December 2011 warrants, to purchase shares of our common stock at an exercise price of $30.75 per share, subject to adjustments upon the occurrence of certain events, at a purchase price of 0.1% of the principal amount of the December 2011 notes. The December 2011 notes accrued interest at a rate of 8% per annum and had a maturity date of December 31, 2012. On March 8, 2013, the December 2011 notes converted into 76,489 shares of our Series B convertible preferred stock and 760,390 shares of our Series B-1 convertible preferred stock, and the December 2011 warrants were canceled pursuant to the warrant cancellation agreement.

The following table summarizes the participation in the December 2011 bridge financing by holders of more than 5% of our capital stock and their affiliated entities:

Name	Aggregate Loan Amount ($)
Funds affiliated with Domain Associates	2,987,760(1)
Funds affiliated with MPM Capital	2,589,392(2)
Funds affiliated with Forward Ventures	717,062(3)

(1) Consists of (a) two notes held by Domain Partners VI, L.P., or Domain VI, each with a principal amount of $937,500 and (b) a note held by Domain VI with a principal amount of $1,112,760. Mr. Podlesak and Dr. Kamdar, members of our board of directors, are partners of Domain Associates, LLC, or Domain LLC, the manager of Domain VI.

(2) Consists of (a) two notes held by MPM BioVentures IV-QP, L.P., or MPM IV-QP, each with a principal amount of $676,896, (b) a note held by MPM IV-QP with a principal amount of $803,438, (c) two notes held by MPM BioVentures IV Strategic Fund, L.P., or MPM Strategic Fund, each with a principal amount of $90,278, (d) a note held by MPM Strategic Fund with a principal amount of $107,155, (e) two notes held by MPM BioVentures IV GMBH & Co. Beteiligungs KG, or MPM Beteiligungs, each with a principal amount of $26,078, (f) a note held by MPM Beteiligungs with a principal amount of $30,953, (g) two notes held by MPM Asset Management Investors BV4 LLC, or MPM BV4, each with a principal amount of $19,248 and (h) a note held by MPM BV4 with a principal amount of $22,846. Dr. Evnin, a member of our board of directors, is a member of MPM BioVentures IV LLC, or MPM IV LLC, which is the managing member of MPM BioVentures IV GP LLC, or MPM IV GP, which is (i) the general partner of each of MPM IV-QP and MPM Strategic Fund, and (ii) the managing limited partner of MPM Beteiligungs. MPM IV LLC is the manager of MPM BV4.

(3) Consists of (a) two notes held by Forward Ventures V, LP, or Forward V, each with a principal amount of $150,000, (b) a note held by Forward V with a principal amount of $178,041, (c) two notes held by Forward Ventures IV, LP, or Forward IV, each with a principal amount of $69,139, (d) a note held by Forward IV with a principal amount of

$82,064, (e) two notes held by Forward Ventures IVB, LP, or Forward IVB, each with a principal amount of $5,861 and (f) a note held by Forward IVB with a principal amount of $6,957. Dr. Royston, a member of our board of directors, is a managing member of Forward Ventures, a managing member of Forward IV Associates, LLC, or Forward IV Associates, and a member of Forward V. Forward IV Associates is the general partner of each of Forward IV and Forward IVB. Forward V Associates, L.L.C., or Forward V Associates, is the general partner of Forward V.

October 2012 Bridge Financing

On October 9, 2012, we entered into a bridge loan financing, or the October 2012 bridge financing, in which we issued convertible promissory notes, or the October 2012 notes, for an aggregate principal amount of $0.8 million. The October 2012 notes accrued interest at a rate of 8% per annum and had a maturity date of October 9, 2013. On March 8, 2013, the October 2012 notes converted into 6,920 shares of our Series B convertible preferred stock and 62,288 shares of our Series B-1 convertible preferred stock.

The following table summarizes the participation in the October 2012 bridge financing by holders of more than 5% of our capital stock and their affiliated entities:

Name	Aggregate Loan Amount ($)
Funds affiliated with Domain Associates	281,250(1)
Funds affiliated with MPM Capital	243,749(2)
Funds affiliated with Forward Ventures	67,500(3)

(1) Consists of a note held by Domain VI with a principal amount of $281,250. Mr. Podlesak and Dr. Kamdar, members of our board of directors, are partners of Domain LLC, the manager of Domain VI.

(2) Consists of (a) a note held by MPM IV-QP with a principal amount of $203,069, (b) a note held by MPM Strategic Fund with a principal amount of $27,083, (c) a note held by MPM Beteiligungs with a principal amount of $7,823 and (d) a note held by MPM BV4 with a principal amount of $5,774. Dr. Evnin, a member of our board of directors, is a member of MPM IV LLC, which is the managing member of MPM IV GP, which is (i) the general partner of each of MPM IV-QP and MPM Strategic Fund, and (ii) the managing limited partner of MPM Beteiligungs. MPM IV LLC is the manager of MPM BV4.

(3) Consists of (a) a note held by Forward V with a principal amount of $45,000, (b) a note held by Forward IV with a principal amount of $20,742 and (c) a note held by Forward IVB with a principal amount of $1,758. Dr. Royston, a member of our board of directors, is a managing member of Forward Ventures, a managing member of Forward IV Associates and a member of Forward V. Forward IV Associates is the general partner of each of Forward IV and Forward IVB. Forward V Associates is the general partner of Forward V.

November 2012 Bridge Financing

On November 19, 2012, we entered into a bridge loan financing, or the November 2012 bridge financing, in which we issued convertible promissory notes, or the November 2012 notes, for (i) an aggregate principal amount of $0.5 million on November 19, 2012, which had a maturity date of November 19, 2013, (ii) an aggregate principal amount of $0.5 million on November 30, 2012, which had a maturity date of November 30, 2013, (iii) an aggregate principal amount of $0.5 million on December 28, 2012, which had a maturity date of December 28, 2013 and (iv) an aggregate principal amount of $0.7 million on January 18, 2013, which had a maturity date of January 18, 2014. The November 2012 notes accrued interest at a rate of 8% per annum. On March 8, 2013, the November 2012 notes converted into 196,306 shares of our Series B-1 convertible preferred stock.

The following table summarizes the participation in the November 2012 bridge financing by holders of more than 5% of our capital stock and their affiliated entities:

Name	Aggregate Loan Amount ($)
Funds affiliated with Domain Associates	1,026,000(1)
Funds affiliated with MPM Capital	701,998(2)
Funds affiliated with Forward Ventures	194,400(3)

(1) Consists of (a) two notes held by Domain Partners VIII, L.P., or Domain VIII, each with a principal amount of $235,751, (b) a note held by Domain VIII with a principal amount of $330,051, (c) a note held by Domain VIII with a principal amount of $216,891, (d) two notes held by DP VIII Associates, L.P., or DP VIII, each with a principal amount of $1,749, (e) a note held by DP VIII with a principal amount of $2,449 and (f) a note held by DP VIII with a principal amount of $1,609. Mr. Podlesak and Dr. Kamdar, members of our board of directors, are partners of Domain LLC, the manager of each of Domain VIII and DP VIII.

(2) Consists of (a) two notes held by MPM IV-QP, each with a principal amount of $135,380, (b) a note held by MPM IV-QP with a principal amount of $189,532, (c) a note held by MPM IV-QP with a principal amount of $124,550, (d) two notes held by MPM Strategic Fund, each with a principal amount of $18,055, (e) a note held by MPM Strategic Fund with a principal amount of $25,278, (f) a note held by MPM Strategic Fund with a principal amount of $16,611, (g) two notes held by MPM Beteiligungs, each with a principal amount of $5,215, (h) a note held by MPM Beteiligungs with a principal amount of $7,301, (i) a note held by MPM Beteiligungs with a principal amount of $4,798, (j) two notes held by MPM BV4, each with a principal amount of $3,849, (k) a note held by MPM BV4 with a principal amount of $5,389 and (l) a note held by MPM BV4 with a principal amount of $3,541. Dr. Evnin, a member of our board of directors, is a member of MPM IV LLC, which is the managing member of MPM IV GP, which is (i) the general partner of each of MPM IV-QP and MPM Strategic Fund, and (ii) the managing limited partner of MPM Beteiligungs. MPM IV LLC is the manager of MPM BV4.

(3) Consists of (a) two notes held by Forward V, each with a principal amount of $30,000, (b) a note held by Forward V with a principal amount of $42,000, (c) a note held by Forward V with a principal amount of $27,600, (d) two notes held by Forward IV, each with a principal amount of $13,828, (e) a note held by Forward IV with a principal amount of $19,359, (f) a note held by Forward IV with a principal amount of $12,722, (g) two notes held by Forward IVB, each with a principal amount of $1,172, (h) a note held by Forward IVB with a principal amount of $1,641 and (i) a note held by Forward IVB with a principal amount of $1,078. Dr. Royston, a member of our board of directors, is a managing member of Forward Ventures, a managing member of Forward IV Associates and a member of Forward V. Forward IV Associates is the general partner of each of Forward IV and Forward IVB. Forward V Associates is the general partner of Forward V.

Convertible Preferred Stock Financings

Conversion of Series A Convertible Preferred Stock

On March 8, 2013, in connection with the Series B-1 financing, 3,939,957 shares of our Series A convertible preferred stock converted into shares of our Series A-1 convertible preferred stock. The Series A convertible preferred stock was issued in 2007, 2008 and 2010 in exchange for convertible debt, accrued interest and cash, for gross cash proceeds of $49.0 million.

The following table sets forth the number of shares of Series A-1 convertible preferred stock received in the conversion of the Series A convertible preferred stock by holders of more than 5% of our capital stock and their affiliated entities. Each share of Series A-1 convertible preferred stock in the table below will convert into one share of our common stock upon completion of this offering.

Name	Series A Convertible Preferred Stock Converted (#)	Shares of Series A-1 Convertible Preferred Stock Issued Upon Conversion of Series A Convertible Preferred Stock (#)
Funds affiliated with Domain Associates(1)	1,641,650	1,641,650
Funds affiliated with MPM Capital(2)	1,422,763	1,422,763
Funds affiliated with Forward Ventures(3)	393,995	393,995

(1) Mr. Podlesak and Dr. Kamdar, members of our board of directors, are partners of Domain LLC.
(2) Dr. Evnin, a member of our board of directors, is a managing director of MPM Capital.
(3) Dr. Royston, a member of our board of directors, is a managing member of Forward Ventures.

Issuance of Series B-1 Convertible Preferred Stock

On March 8, 2013, we entered into the Series B-1 financing, pursuant to a Series B-1 preferred stock purchase agreement, or the Series B-1 purchase agreement, in which we agreed to sell up to 2,763,239 shares of our Series B-1 convertible preferred stock at a price per share of $11.19 in five tranches. The first tranche closed on March 8, 2013, at which time we issued 1,724,067 shares of Series B-1 convertible preferred stock, for net cash proceeds of $1.3 million and conversion of $18.0 million in principal amount of convertible notes and accrued interest thereon. In connection with the closing of the first tranche, the convertible notes we issued in the August 2010 bridge financing, December 2011 bridge financing, October 2012 bridge financing and November 2012 bridge financing and certain convertible notes we issued in February 2013 converted into either shares of Series B-1 convertible preferred stock or shares of Series B convertible preferred stock, contingent on whether the note holder invested its pro rata share in the Series B-1 financing. Collectively, these convertible notes converted into 1,605,697 shares of our Series B-1 convertible preferred stock and 148,153 shares of our Series B convertible preferred stock. The second tranche closed on April 30, 2013, at which time we issued 98,268 additional shares of Series B-1 convertible preferred stock, for gross cash proceeds of $1.1 million. In August 2013, we amended the Series B-1 purchase agreement in order to add RMI Investments, S.á.r.l., or RMI, as a purchaser to the third tranche and any subsequent tranches. The third tranche closed on August 20, 2013, at which time we issued 605,280 additional shares of Series B-1 convertible preferred stock, for gross cash proceeds of $6.8 million. The Series B-1 purchase agreement provides for closings of fourth and fifth tranches upon the completion of certain closing conditions. In November 2013, we entered into an acknowledgement and waiver agreement with the purchasers of Series B-1 convertible preferred stock, pursuant to which the investors waived certain closing conditions relating to the date of closing of the fourth and fifth tranches, including the condition that we complete certain patent assignments as more fully described below. See “Certain Relationships and Related Party Transactions—NovaMedica Agreements.” Accordingly, the fourth and fifth tranches were accelerated and closed on November 20, 2013. At the closing of the fourth tranche, we issued 678,988 additional shares of Series B-1 convertible preferred stock, for gross cash proceeds of $7.6 million. At the closing of the fifth tranche, we issued 428,839 additional shares of Series B-1 convertible preferred stock, for gross cash proceeds of $4.8 million.

The tables below set forth the number of shares of Series B-1 convertible preferred stock purchased by holders of more than 5% of our capital stock and their affiliated entities in each of the five tranches of the Series B-1 financing. Each share of Series B-1 convertible preferred stock in the tables below will convert into one share of our common stock upon completion of this offering.

First Tranche—March 2013

Name	Series B-1 Convertible Preferred Stock (#)	Cancellation of Indebted-ness (Note Conversion) ($)	Cash Purchase Price of Series B-1 Convertible Preferred Stock ($)	Aggregate Purchase Price (including Note Conversion and Cash Purchase Price) ($)
Funds affiliated with Domain Associates[1]	700,273	7,283,713	554,472	7,838,185
Funds affiliated with MPM Capital[2]	589,158	6,118,207	476,294	6,594,501
Funds affiliated with Forward Ventures[3]	163,149	1,694,273	131,897	1,826,170

Second Tranche—April 2013

Name	Series B-1 Convertible Preferred Stock (#)	Aggregate Purchase Price of Series B-1 Convertible Preferred Stock ($)
Funds affiliated with Domain Associates(1)	41,124	460,316
Funds affiliated with MPM Capital(2)	35,324	395,414
Funds affiliated with Forward Ventures(3)	9,781	109,499

Third Tranche—August 2013

Name	Series B-1 Convertible Preferred Stock (#)	Aggregate Purchase Price of Series B-1 Convertible Preferred Stock ($)
Funds affiliated with Domain Associates(1)	141,870	1,587,973
Funds affiliated with MPM Capital(2)	121,866	1,364,076
Funds affiliated with Forward Ventures(3)	33,746	377,744
RMI Investments	303,761	3,400,000

Fourth Tranche—November 2013

Name	Series B-1 Convertible Preferred Stock (#)	Aggregate Purchase Price of Series B-1 Convertible Preferred Stock ($)
Funds affiliated with Domain Associates(1)	176,551	1,976,143
Funds affiliated with MPM Capital(2)	151,656	1,697,517
Funds affiliated with Forward Ventures(3)	41,996	470,082
RMI Investments	303,761	3,400,000

Fifth Tranche—November 2013

Name	Series B-1 Convertible Preferred Stock (#)	Aggregate Purchase Price of Series B-1 Convertible Preferred Stock ($)
RMI Investments	428,839	4,800,000

(1) Mr. Podlesak and Dr. Kamdar, members of our board of directors, are partners of Domain LLC.
(2) Dr. Evnin, a member of our board of directors, is a managing director of MPM Capital.
(3) Dr. Royston, a member of our board of directors, is a managing member of Forward Ventures.

Issuance of Series B-1 Convertible Preferred Stock to Eddingpharm

On April 18, 2013, we entered into a license and development agreement, or the Eddingpharm license agreement, with Eddingpharm International Company Limited, or Eddingpharm. In connection with the Eddingpharm license agreement, Eddingpharm agreed to purchase shares of our Series B-1 convertible preferred stock. On April 18, 2013, we entered into a preferred stock financing with Eddingpharm, or the Eddingpharm Series B-1 financing, in which we agreed to sell up to 446,707 shares of our Series B-1 convertible preferred stock at a price per share of $11.19 in two tranches. The first tranche closed on July 17, 2013, at which time we issued 223,353 shares of Series B-1 convertible preferred stock, for gross cash proceeds of $2.5 million. In November 2013, we entered into a letter agreement with Eddingpharm, pursuant to which Eddingpharm waived certain closing conditions relating to the date of closing of the second tranche. Accordingly, the second tranche was accelerated and closed on

November 15, 2013, at which time we issued 223,353 additional shares of Series B-1 convertible preferred stock, for gross cash proceeds of $2.5 million.

The tables below set forth the number of shares of Series B-1 convertible preferred stock purchased by Eddingpharm in each of the two tranches of the Eddingpharm Series B-1 financing. Each share of Series B-1 convertible preferred stock in the tables below will convert into one share of our common stock upon completion of this offering.

First Tranche—July 2013

Name	Series B-1 Convertible Preferred Stock (#)	Aggregate Purchase Price of Series B-1 Convertible Preferred Stock ($)
Eddingpharm	223,353	2,500,000

Second Tranche—November 2013

Name	Series B-1 Convertible Preferred Stock (#)	Aggregate Purchase Price of Series B-1 Convertible Preferred Stock ($)
Eddingpharm	223,353	2,500,000

NovaMedica Agreements

In connection with the third tranche of the Series B-1 financing in August 2013, we entered into a technology transfer agreement with DRI, an affiliate of Domain VIII. Domain VIII and Domain VI are both managed by Domain LLC. Pursuant to the technology transfer agreement, in exchange for a nominal payment, we assigned to DRI certain patent applications, or the assigned patents, in Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Ukraine and Uzbekistan, or the territory, and granted to DRI an exclusive, fully paid-up, royalty-free, irrevocable and assignable license under our other intellectual property to develop and commercialize entinostat and any other product containing the same active ingredient in the territory. We concurrently entered into a sublicense agreement, or the DRI sublicense, with DRI and a sublicense agreement, or the NovaMedica sublicense, with NovaMedica. NovaMedica is jointly owned by Rusnano Medinvest LLC, or Rusnano Medinvest, and DRI. RMI is a wholly owned subsidiary of Rusnano Medinvest. Pursuant to the DRI sublicense, we granted to DRI an exclusive sublicense under the patents and other intellectual property licensed to us by Bayer to develop, manufacture and commercialize entinostat and any other product containing the same active ingredient in the Russian Federation. Pursuant to the NovaMedica sublicense, we granted to NovaMedica an exclusive sublicense under the patents and other intellectual property licensed to us by Bayer to develop, manufacture and commercialize entinostat and any other product containing the same active ingredient in the rest of the territory. Immediately thereafter, we, together with DRI and NovaMedica, executed an assignment and assumption agreement, pursuant to which the assigned patents and all of DRI's rights and obligations under the technology transfer agreement and the DRI sublicense were transferred to NovaMedica. We agreed to perform all actions required to ensure that the patent assignments to DRI are registered and recorded in each country in the territory, and we agreed to provide all assistance that may be reasonably required to complete the subsequent transfer to NovaMedica of the assigned patents and DRI's rights under the technology transfer agreement and the DRI sublicense.

Under the terms of the technology transfer agreement, we have agreed, at NovaMedica's reasonable request, to facilitate NovaMedica's establishment of a manufacturing relationship

with any of our third-party manufacturers. We also have agreed to provide NovaMedica with certain know-how and development and manufacturing support, including making our employees available to provide scientific and technical explanations, advice and support that may be reasonably required by NovaMedica. NovaMedica is required to reimburse us for any out-of-pocket expenses incurred by us in providing this assistance. In addition, we have agreed to sell to NovaMedica, at cost, our on-hand quantities of entinostat or any other product containing the same active ingredient to enable NovaMedica to conduct clinical trials of such product in the territory, so long as any sale does not reasonably interfere with our own development and commercialization activities.

In October 2013, we entered into a letter agreement with DRI pursuant to which we are obligated to indemnify DRI against certain third party claims. In particular, DRI, as an owner of NovaMedia, may be obligated under certain Russian loss compensation laws to make additional contributions to NovaMedica should the patent applications assigned by us to DRI under the technology transfer agreement, which were subsequently assigned by DRI to NovaMedica, diminish in value. We have agreed to indemnify DRI against any claims brought in respect of such Russian loss compensation laws, where such claims arise out of our breach of specified representations and warranties that we made in the technology transfer agreement, up to a maximum amount of $1.2 million.

At the same time that we entered into the technology transfer agreement, the DRI sublicense and the NovaMedica sublicense, we also entered into a clinical development and collaboration agreement, or the collaboration agreement, and a supply agreement with NovaMedica. The collaboration agreement establishes a framework under which we will consult with NovaMedia on development and regulatory issues relating to entinostat, including through various joint committees to be formed by the parties. Under the supply agreement, we are obligated to provide NovaMedica with a commercial supply of entinostat at a price to be negotiated in the future after the specifications for the commercial form of entinostat are finalized. Such price is limited to a fixed percentage mark-up over our costs. We do not consider our agreements with DRI and NovaMedica to be material given the early stage of development of entinostat in the territory and immateriality of the market in the territory.

Participation in this Offering

Certain of our existing stockholders, including affiliates of our directors, have indicated an interest in purchasing up to an aggregate of approximately $15.0 million of shares of our common stock in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters may determine to sell more, less or no shares in this offering to any of these stockholders, or any of these stockholders may determine to purchase more, less or no shares in this offering.

Investors' Rights Agreement

We are party to an amended and restated investors' rights agreement, or the investors' rights agreement, dated March 8, 2013, with the holders of our convertible preferred stock, certain holders of our common stock and Bayer. The investors' rights agreement provides that the holders of common stock issuable upon conversion of our convertible preferred stock have the right to demand that we file a registration statement or request that their shares of common stock be covered by a registration statement that we otherwise file. In addition to the registration rights, the investors' rights agreement provides for certain information rights and rights of first refusal. The provisions of the investors' rights agreement will terminate upon the completion of this offering, other than the registration rights which will terminate upon the

earlier of (i) with respect to each stockholder, the date when such stockholder can sell all of its registrable shares in a single transaction pursuant to Rule 144 of the Securities Act, (ii) three years after this offering or (iii) a liquidating transaction as defined in our amended and restated certificate of incorporation, as currently in effect. The registration rights are described in more detail under “Description of Capital Stock—Registration Rights.”

Voting Agreement

We have entered into an amended and restated voting agreement, or the voting agreement, with certain holders of our common stock and certain holders of our convertible preferred stock. Pursuant to the voting agreement, holders of our Series A-1 convertible preferred stock and Series B-1 convertible preferred stock have agreed to vote to approve the following: one director to be a designee of Domain VIII, DP VIII, Domain VI and DP VI Associates, L.P., who is currently Kim P. Kamdar, Ph.D.; one director to be a designee of MPM IV-QP, who is currently Luke Evnin, Ph.D.; and one director to be a designee of RMI, who is currently Fabrice Egros, Ph.D. Certain holders of common stock have agreed to vote to approve the following: one director to be our Chief Executive Officer, who is currently Arlene M. Morris; and one director to be nominated by such holders of common stock, who is currently Dennis G. Podlesak. Certain holders of common stock and convertible preferred stock have agreed to vote together as a single class to nominate one director who is not an affiliate of us or any of our investors, to be designated as independent by unanimous approval of our board of directors. The voting agreement will terminate upon the earlier of (i) the completion of this offering, (ii) a liquidating transaction as defined in the voting agreement or (iii) 10 years from the date of the voting agreement.

Other Transactions

We have entered into various employment related agreements and compensatory arrangements with our directors and executive officers that, among other things, provide for compensatory and certain severance and change of control benefits. For a description of these agreements and arrangements, see the section entitled “Executive and Director Compensation—Executive Compensation—Employment Agreements.”

We entered into separate indemnification agreements with our directors and officers. See “Executive and Director Compensation—Limitation of Liability and Indemnification Agreements.”

Policies and Procedures Regarding Transactions with Related Parties

In November 2013, our board of directors adopted a written related party transaction policy that will be in effect upon completion of this offering. Accordingly, following this offering, all proposed related party transactions must be approved by either (i) our nominating and corporate governance committee or (ii) our full board of directors. This review will cover any transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships, in which we were or are to be a participant, the amount involved exceeds $120,000, and a related party had or will have a direct or indirect material interest, including purchases of goods or services by or from a related party in which the related party has a material interest, and indebtedness, guarantees of indebtedness and employment by us of a related party. A “related party” is any person who is or was one of our executive officers, directors or director nominees or is a holder of more than 5% of our common stock, or their immediate family members or any entity owned or controlled by any of the foregoing persons.

All of the transactions described above were entered into prior to the adoption of this policy and were approved by our board of directors.

PRINCIPAL STOCKHOLDERS

The following table sets forth certain information known to us regarding the beneficial ownership of our common stock as of August 15, 2014, and as adjusted to reflect the sale of shares of common stock in this offering and the conversion of all outstanding shares of our convertible preferred stock by:

- each of our named executive officers;
- each of our directors;
- all of our executive officers and directors as a group; and
- each person, or group of affiliated persons, known by us to beneficially own more than 5% of any class of our voting securities.

We have based our calculation of beneficial ownership prior to this offering on 7,880,745 shares of common stock outstanding on August 15, 2014, assuming the conversion of all outstanding shares of our convertible preferred stock into an aggregate of 7,807,593 shares of our common stock upon completion of this offering. We have based our calculation of beneficial ownership after this offering on 12,180,745 shares of our common stock outstanding immediately following the completion of this offering, which gives effect to the issuance of 4,300,000 shares of common stock in this offering and the conversion of all outstanding shares of our convertible preferred stock into an aggregate of 7,807,593 shares of our common stock upon completion of this offering. Ownership information assumes no exercise of the underwriters' over-allotment option.

Certain of our existing stockholders, including affiliates of our directors, have indicated an interest in purchasing up to an aggregate of approximately $15.0 million of shares of our common stock in this offering at the initial public offering price. However, because indications of interest are not binding agreements or commitments to purchase, the underwriters may determine to sell more, less or no shares in this offering to any of these stockholders, or any of these stockholders may determine to purchase more, less or no shares in this offering. The information set forth in the table below does not reflect any potential purchase of any shares in this offering by such parties.

Information with respect to beneficial ownership has been furnished to us by each director, executive officer or stockholder who holds more than 5% of any class of our voting securities, as the case may be. Beneficial ownership is determined according to the rules of the SEC and generally means that a person has beneficial ownership of a security if he or she possesses sole or shared voting or investment power of that security, and includes options and warrants that are currently exercisable within 60 days of August 15, 2014. Options to purchase shares of our common stock that are exercisable within 60 days of August 15, 2014 are deemed to be beneficially owned by the persons holding these options for the purpose of computing percentage ownership of that person, but are not treated as outstanding for the purpose of computing any other person's ownership percentage. Except as indicated in the footnotes below, each of the beneficial owners named in the table below has, and upon completion of this offering will have, to our knowledge, sole voting and investment power with respect to all shares of common stock listed as beneficially owned by him or her, except for shares owned jointly with that person's spouse. Unless otherwise indicated, the address for each of the stockholders in the table below is c/o Syndax Pharmaceuticals, Inc., 400 Totten Pond Road, Suite 110, Waltham, Massachusetts 02451.

Name and Address of Beneficial Owner	Shares of Common Stock Beneficially Owned		Percentage of Shares Beneficially Owned	
	Before Offering	After Offering	Before Offering	After Offering
Named Executive Officers and Directors:				
Arlene M. Morris(1)	353,610	353,610	4.3%	2.8%
Robert S. Goodenow, Ph.D.(2)	120,376	120,376	1.5%	1.0%
John S. Pallies(3)	76,316	76,316	1.0%	*
Dennis G. Podlesak(4)	90,324	90,324	1.1%	*
Fabrice Egros, Ph.D.	—	—	*	*
Luke Evnin, Ph.D.(5)	2,320,767	2,320,767	29.4%	19.1%
Kim P. Kamdar, Ph.D.(6)	1,600	1,600	*	*
Ivor Royston, M.D.(7)	642,667	642,667	8.2%	5.3%
Richard P. Shea(8)	11,652	11,652	*	*
George W. Sledge Jr., M.D.(9)	11,652	11,652	*	*
All executive officers and directors as a group (12 persons)	3,706,295	3,706,295	43.0%	28.7%
5% Stockholders:				
Entities affiliated with Domain Associates(10)	2,703,068	2,703,068	34.3%	22.2%
Entities affiliated with MPM Capital(11)	2,320,767	2,320,767	29.4%	19.1%
Entities affiliated with Forward Ventures(12)	642,667	642,667	8.2%	5.3%
Eddingpharm(13)	446,706	446,706	5.7%	3.7%
RMI Investments(14)	1,036,361	1,036,361	13.2%	8.5%

* Represents beneficial ownership of less than 1% of our outstanding common stock.

(1) Consists solely of 353,610 shares of common stock issuable upon the exercise of stock options within 60 days of August 15, 2014.

(2) Consists solely of 120,376 shares of common stock issuable upon the exercise of stock options within 60 days of August 15, 2014.

(3) Consists solely of 76,316 shares of common stock issuable upon the exercise of stock options within 60 days of August 15, 2014.

(4) Consists solely of 90,324 shares of common stock issuable upon the exercise of stock options within 60 days of August 15, 2014. Mr. Podlesak is a partner of Domain LLC. Mr. Podlesak has no voting or dispositive control over and disclaims beneficial ownership of the shares held by the entities affiliated with Domain LLC listed in footnote 10 below.

(5) Consists of (a) 1,933,447 shares of common stock held by MPM IV-QP, (b) 257,861 shares of common stock held by MPM Strategic Fund, (c) 74,484 shares of common stock held by MPM Beteiligungs, and (d) 54,975 shares of common stock held by MPM BV4. Dr. Evnin is a member of MPM IV LLC, which is the managing member of MPM IV GP, which is (i) the general partner of each of MPM IV-QP and MPM Strategic Fund, and (ii) the managing limited partner of MPM Beteiligungs. MPM IV LLC is the manager of MPM BV4. Dr. Evnin shares power to vote, acquire, hold and dispose of the shares held by MPM IV-QP, MPM Strategic Fund, MPM Beteiligungs and MPM BV4, or collectively the MPM Entities. Dr. Evnin disclaims beneficial ownership of all shares held by the MPM Entities, except to the extent of his actual pecuniary interest therein. In addition, the number of shares of common stock beneficially owned by Dr. Evnin after this offering includes those set forth in footnote 11 below.

(6) Consists of 1,600 shares of common stock held by Domain LLC. Dr. Kamdar is a managing member of Domain LLC, and shares voting and investment power over the shares held by Domain LLC. Dr. Kamdar disclaims beneficial ownership of all shares held by Domain LLC, except to the extent of her actual pecuniary interest therein. In addition, the number of shares of common stock beneficially owned by Dr. Kamdar after this offering includes those shares held by Domain LLC set forth in footnote 10 below.

(7) Consists of (a) 428,448 shares of common stock held by Forward V, (b) 197,483 shares of common stock held by Forward IV, and (c) 16,736 shares of common stock held by Forward IVB. Dr. Royston is a member of Forward V and a managing member of Forward IV Associates, which is the general partner of each of Forward IV and Forward IVB. Forward V, Forward IV and Forward IVB are referred to herein as the Forward Entities. Dr. Royston shares voting and investment power over the shares held by the Forward Entities, and disclaims beneficial ownership of all shares held by the Forward Entities, except to the extent of his actual pecuniary interest therein. In addition, the number of shares of common stock beneficially owned by Dr. Royston after this offering includes those set forth in footnote 12 below.

(8) Consists solely of 11,652 shares of common stock issuable upon the exercise of stock options within 60 days of August 15, 2014.
(9) Consists solely of 11,652 shares of common stock issuable upon the exercise of stock options within 60 days of August 15, 2014.
(10) Consists of (a) 2,179,819 shares of common stock held by Domain VI, (b) 500,532 shares of common stock held by Domain VIII, (c) 17,407 shares of common stock held by DP VI, (d) 3,710 shares of common stock held by DP VIII, and (e) 1,600 shares of common stock held by Domain LLC. One Palmer Square VI is the general partner of each of Domain VI and DP VI, and One Palmer Square VIII is the general partner of each of Domain VIII and DP VIII. Domain VI, DP VI, Domain VIII, DP VIII and Domain LLC are referred to herein as the Domain Entities. James C. Blair, Brian H. Dovey, Jesse I. Treu, Kathleen K. Schoemaker and Nicole Vitullo, the managing members of One Palmer Square VI, share voting and investment power over the shares held by Domain VI and DP VI. James C. Blair, Brian H. Dovey, Jesse I. Treu, Kathleen K. Schoemaker, Brian K. Halak and Nicole Vitullo, the managing members of One Palmer Square VIII, share voting and investment power over the shares held by Domain VIII and DP VIII. James C. Blair, Brian H. Dovey, Jesse I. Treu, Kathleen K. Schoemaker, Brian K. Halak, Nicole Vitullo and Dr. Kamdar, the managing members of Domain LLC, share voting and investment power over the shares held by Domain LLC. Each managing member of One Palmer Square VI, One Palmer Square VIII and Domain LLC disclaims beneficial ownership of all shares held by the Domain Entities, except to the extent of each such managing member's actual pecuniary interest therein. The address for the Domain Entities is One Palmer Square, Suite 515, Princeton, NJ 08542.
(11) Consists of (a) 1,933,447 shares of common stock held by MPM IV-QP, (b) 257,861 shares of common stock held by MPM Strategic Fund, (c) 74,484 shares of common stock held by MPM Beteiligungs, and (d) 54,975 shares of common stock held by MPM BV4. MPM IV LLC is the managing member of MPM IV GP, which is (i) the general partner of each of MPM IV-QP and MPM Strategic Fund, and (ii) the managing limited partner of MPM Beteiligungs. MPM IV LLC is the manager of MPM BV4. Dr. Evnin, Ansbert Gadicke, Todd Foley, James Scopa and Vaughn Kailian, members of MPM IV LLC, share power to vote, acquire, hold and dispose of the shares held by the MPM Entities. Each member of MPM IV LLC disclaims beneficial ownership of all shares held by the MPM Entities, except to the extent of each such member's actual pecuniary interest therein. The address for the MPM Entities is 601 Gateway Blvd., Suite 350, South San Francisco, CA 94080.
(12) Consists of (a) 428,448 shares of common stock held by Forward V, (b) 197,483 shares of common stock held by Forward IV, and (c) 16,736 shares of common stock held by Forward IVB. Forward V Associates is the general partner of Forward V, and voting power is shared by its key voting members and managing members. Forward IV Associates is the general partner of each of Forward IV and Forward IVB. Standish M. Fleming and Dr. Royston, the managing members of Forward IV Associates, and Stuart Collinson, the key member of Forward IV Associates, share voting and investment control over the shares held by Forward IV and Forward IVB. Each voting member, managing member and key member of Forward V Associates and Forward IV Associates disclaims beneficial ownership of all shares held by the Forward Entities, except to the extent of each such member's actual pecuniary interest therein. The address for the Forward Entities is 9393 Towne Centre Dr., Suite 200, San Diego, CA 92121.
(13) The address for Eddingpharm is Suite 4804, 48/F Central Plaza, 18 Harbour Road, Wan Chai, Hong Kong.
(14) The address for RMI Investments is 7, Rue Robert Stümper, L-2557, Luxembourg.

DESCRIPTION OF CAPITAL STOCK

Immediately prior to the completion of this offering, our amended and restated certificate of incorporation will authorize us to issue up to 100,000,000 shares of common stock, par value $0.0001 per share and 10,000,000 shares of preferred stock, par value $0.001 per share. As of June 30, 2014, there were outstanding:

- 7,880,745 shares of our common stock held by approximately 33 stockholders, which gives effect to the conversion of all outstanding shares of our convertible preferred stock into an aggregate of 7,807,593 shares of our common stock upon completion of this offering;
- 923,874 shares of our common stock subject to outstanding options; and
- 233,415 shares of our common stock issuable upon the exercise of the Bayer Warrant at an exercise price of $1.23 per share, based upon 13,104,619 shares of our common stock outstanding as of June 30, 2014 on a fully diluted basis immediately following this offering, which warrant is expected to remain outstanding upon completion of this offering.

The following description of our capital stock is not complete and is subject to and qualified in its entirety by our amended and restated certificate of incorporation and amended and restated bylaws and by the provisions of applicable Delaware law. Copies of these documents are filed with the SEC as exhibits to our registration statement, of which this prospectus forms a part. The descriptions of our common stock, preferred stock and warrant reflect changes to our capital structure that will occur immediately in connection with the completion of this offering.

Common Stock

Voting Rights

Each holder of common stock is entitled to one vote for each share on all matters submitted to a vote of the stockholders. The affirmative vote of holders of at least 66% of the voting power of all of the then-outstanding shares of capital stock, voting as a single class, will be required to amend certain provisions of our amended and restated certificate of incorporation, including provisions relating to amending our amended and restated bylaws, the classified board, the size of our board, removal of directors, director liability, vacancies on our board, special meetings, stockholder notices, actions by written consent and exclusive jurisdiction.

Dividends

Subject to preferences that may apply to any outstanding preferred stock, holders of our common stock are entitled to receive ratably any dividends that our board of directors may declare out of funds legally available for that purpose.

Liquidation

In the event of our liquidation, dissolution or winding up, holders of our common stock are entitled to share ratably in all assets remaining after payment of liabilities and the liquidation preference of any outstanding preferred stock.

Rights and Preferences

Holders of our common stock have no preemptive, conversion, subscription or other rights, and there are no redemption or sinking fund provisions applicable to our common stock. 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 our preferred stock that we may designate in the future.

Fully Paid and Nonassessable

All outstanding shares of our common stock are fully paid and non-assessable, and the shares of common stock to be issued upon completion of this offering will be fully paid and non-assessable.

Preferred Stock

Immediately prior to the completion of this offering, all outstanding shares of our preferred stock will convert into shares of common stock. Upon completion of this offering, our board of directors will have the authority, without further action by our stockholders, to issue up to 10,000,000 shares of preferred stock in one or more series and to fix the number, rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences and sinking fund terms, and the number of shares constituting any series or the designation of such series, any or all of which may be greater than the rights of common stock. The issuance of our preferred stock could adversely affect the voting power of holders of common stock and the likelihood that such holders will receive dividend payments and payments upon liquidation. In addition, the issuance of preferred stock could have the effect of delaying, deferring or preventing a change of control or other corporate action. We have no current plan to issue any shares of preferred stock.

Bayer Warrant

We issued the Bayer Warrant to Bayer to purchase such number of shares of our common stock initially equal to 1.75% of the shares of common stock outstanding on a fully diluted basis as of the earlier of the date of exercise or our initial public offering, at an exercise price of $1.23 per share. The Bayer Warrant contains a cashless exercise feature and Bayer may, at its option, exercise the Bayer Warrant in whole or in part at any time prior to expiration upon the earlier of (i) 10 years after our initial public offering or (ii) a consummation of a sale of all or substantially all of our assets or business.

Registration Rights

Holders of 8,087,675 shares of our convertible preferred stock, common stock, and common stock issuable upon exercise of the Bayer Warrant, have the right to demand that we file a registration statement or request that we cover their shares by a registration statement that we otherwise file, as described below.

Demand Registration Rights

At any time after 180 days after the completion of this offering, holders of at least 35% of the shares having demand registration rights may request that we register all or a portion of their shares of common stock for sale under the Securities Act. We will effect the registration as requested, unless, in the good faith judgment of our board of directors, such registration would be seriously detrimental to the company and should be delayed. In addition, when we are eligible for the use of Form S-3, or any successor form, holders of at least 20% of the shares

having demand registration rights may request that we register all or a portion of their common stock for sale under the Securities Act on Form S-3, or any successor form, so long as the aggregate price, net of underwriting discounts and commissions, to the public in connection with any such offering is more than $1 million.

Incidental Registration Rights

In addition, if at any time after this offering we register any shares of our common stock, the holders of all shares having piggyback registration rights are entitled to notice of the registration and to include all or a portion of their shares of common stock in the registration.

Other Provisions

In the event that any registration in which the holders of registrable shares participate pursuant to the investors' rights agreement is an underwritten public offering, the number of registrable shares to be included may, in specified circumstances, be limited due to market conditions.

We will pay all registration expenses, other than underwriting discounts, selling commissions and stock transfer taxes, and the reasonable fees and expenses of a single special counsel for the selling stockholders, related to any demand, piggyback and Form S-3 registration. The investors' rights agreement contains customary cross-indemnification provisions, pursuant to which we must indemnify the selling stockholders in the event of material misstatements or omissions in the registration statement attributable to us, and they must indemnify us for material misstatements or omissions in the registration statement attributable to them. The demand, piggyback and Form S-3 registration rights described above will expire, with respect to any particular stockholder, upon the earlier of (i) the date when such stockholder can sell all of its registrable shares in a single transaction pursuant to Rule 144 of the Securities Act, (ii) three years after our initial public offering or (iii) a liquidating transaction as defined in our amended and restated certificate of incorporation, as currently in effect.

Anti-Takeover Provisions

Certificate of Incorporation and Bylaws to be in Effect Immediately Prior to Completion of this Offering

Our amended and restated certificate of incorporation and amended and restated bylaws, each to become effective immediately prior to the completion of this offering, will include a number of provisions that may deter or impede hostile takeovers or changes of control or management. These provisions include:

- *Issuance of undesignated preferred stock.* After the filing of our amended and restated certificate of incorporation, our board of directors will have the authority, without further action by the stockholders, to issue up to 10,000,000 shares of undesignated preferred stock with rights and preferences, including voting rights, designated from time to time by our board of directors. The existence of authorized but unissued shares of preferred stock enables our board of directors to make it more difficult or to discourage an attempt to obtain control of us by means of a merger, tender offer, proxy contest or otherwise.
- *Classified board.* Our amended and restated certificate of incorporation provides for a classified board of directors consisting of three classes of directors, with staggered three-year terms. Only one class of directors will be elected at each annual meeting of our stockholders, with the other classes continuing for the remainder of their respective

three-year terms. This provision may have the effect of delaying a change in control of our board.

- *Board of directors vacancies.* Our amended and restated certificate of incorporation and amended and restated bylaws authorize only our board of directors to fill vacant directorships. In addition, the number of directors constituting our board of directors may be set only by resolution adopted by a majority vote of our entire board of directors. These provisions prevent a stockholder from increasing the size of our board of directors and gaining control of our board of directors by filling the resulting vacancies with its own nominees.
- *Stockholder action; special meetings of stockholders.* Our amended and restated certificate of incorporation provides that our stockholders may not take action by written consent, but may only take action at annual or special meetings of our stockholders. Stockholders will not be permitted to cumulate their votes for the election of directors. Our amended and restated certificate of incorporation further provides that only the chairman of our board of directors or a majority of our board of directors may call special meetings of our stockholders.
- *Advance notice requirements for stockholder proposals and director nominations.* Our amended and restated bylaws provide advance notice procedures for stockholders seeking to bring business before our annual meeting of stockholders, or to nominate candidates for election as directors at our annual meeting of stockholders. Our amended and restated bylaws also specify certain requirements as to the form and content of a stockholder's notice. These provisions may make it more difficult for our stockholders to bring matters before our annual meeting of stockholders or to nominate directors at annual meetings of stockholders.

We designed these provisions to enhance the likelihood of continued stability in the composition of our board of directors and its policies, to discourage certain types of transactions that may involve an actual or threatened acquisition of us, and to reduce our vulnerability to an unsolicited acquisition proposal. We also designed these provisions to discourage certain tactics that may be used in proxy fights. However, these provisions could have the effect of discouraging others from making tender offers for our shares and, as a consequence, they may also reduce fluctuations in the market price of our shares that could result from actual or rumored takeover attempts.

Section 203 of the Delaware General Corporation Law

We are subject to Section 203 of the DGCL, which prohibits a Delaware corporation from engaging in a business combination with any interested stockholder for a period of three years following the date the person became an interested stockholder, with the following exceptions:

- before such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested holder;
- upon completion 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 began, excluding for purposes of determining the voting stock outstanding (but not the outstanding voting stock owned by the interested stockholder) those shares owned (a) by persons who are directors and also officers and (b) pursuant to employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; and

- on or after such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of the stockholders, and not by written consent, by the affirmative vote of at least 66 $^{2}/_{3}$% of the outstanding voting stock that is not owned by the interested stockholder.

In general, Section 203 of the DGCL defines business combination to include the following:

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

In general, Section 203 of the DGCL defines an “interested stockholder” as an entity or person who, together with the entity’s or person’s affiliates and associates, beneficially owns, or is an affiliate of the corporation and within three years prior to the time of determination of interested stockholder status did own, 15% or more of the outstanding voting stock of the corporation.

A Delaware corporation may “opt out” of these provisions with an express provision in its certificate of incorporation. We have not opted out of these provisions, which may as a result, discourage or prevent mergers or other takeover or change of control attempts of us.

Choice of Forum

Our amended and restated certificate of incorporation will provide that the Court of Chancery of the State of Delaware will be the exclusive forum for any derivative action or proceeding brought on our behalf, any action asserting a breach of fiduciary duty owed by any director, officer, employee or agent to us or our stockholders, any action asserting a claim against us arising pursuant to the DGCL or our certificate of incorporation or bylaws, any action to interpret, apply, enforce or determine the validity of our certificate of incorporation or bylaws, or any action asserting a claim against us that is governed by the internal affairs doctrine. However, several lawsuits involving other companies have been brought challenging the validity of choice of forum provisions in certificates of incorporation, and it is possible that a court could rule that such provision is inapplicable or unenforceable.

Transfer Agent and Registrar

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

NASDAQ Global Market

We have applied to have our common stock approved for listing on The NASDAQ Global Market under the trading symbol “SNDX.”

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, no public market for our common stock existed, and a liquid trading market for our common stock may not develop or be sustained after this offering. Future sales of substantial amounts of our common stock in the public market, including shares issued upon exercise of outstanding options and warrants, or the anticipation of such sales, could adversely affect prevailing market prices of our common stock from time to time and could impair our future ability to raise equity capital in the future. Furthermore, because only a limited number of shares of our common stock will be available for sale shortly after this offering due to certain contractual and legal restrictions on resale described below, sales of substantial amounts of our common stock in the public market after such restrictions lapse, or the anticipation of such sales, could adversely affect the prevailing market price of our common stock and our ability to raise equity capital in the future.

Based on the number of shares of common stock outstanding as of June 30, 2014, upon completion of this offering, 12,180,745 shares of our common stock will be outstanding. The number of shares outstanding upon completion of this offering assumes no exercise of outstanding options or the Bayer Warrant, and no exercise of the underwriters' over-allotment option.

All of the shares sold in this offering will be freely tradable unless purchased by our affiliates. The remaining 7,880,745 shares of common stock outstanding after this offering will be restricted as a result of securities laws or lock-up agreements as described below. Following the expiration of the lock-up period, all shares will be eligible for resale, subject to compliance with Rule 144 or Rule 701 of the Securities Act to the extent these shares have been released from any repurchase option that we may hold.

We may issue shares of common stock from time to time as consideration for future acquisitions, investments or other corporate purposes. In the event that any such acquisition, investment or other transaction is significant, the number of shares of common stock that we may issue may in turn be significant. We may also grant registration rights covering those shares of common stock issued in connection with any such acquisition and investment.

In addition, 3,288,289 shares of common stock that are either subject to outstanding options or warrants or reserved for future issuance under our equity incentive plans will become eligible for sale in the public market to the extent permitted by the provisions of various vesting schedules, the lock-up agreements and Rule 144 and Rule 701 of the Securities Act.

Rule 144

In general, under Rule 144 of the Securities Act, as in effect on the date of this prospectus, beginning 90 days after the date of this prospectus, any person who is not our affiliate at any time during the preceding three months, and who has beneficially owned their shares for at least six months, including the holding period of any prior owner other than one of our affiliates, would be entitled to sell an unlimited number of shares of our common stock provided current public information about us is available, and, after owning such shares for at least one year, including the holding period of any prior owner other than one of our affiliates, would be entitled to sell an unlimited number of shares of our common stock without restriction.

Beginning 90 days after the date of this prospectus, a person who is our affiliate or who was our affiliate at any time during the preceding three months, and who has beneficially owned

restricted securities for at least six months, including the holding period of any prior owner other than one of our affiliates, is entitled to sell within any three-month period a number of shares that does not exceed the greater of:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately 121,807 shares, or 128,257 shares if the underwriters exercise their over-allotment option in full, immediately following this offering, based on the number of shares of our common stock outstanding upon completion of this offering; or
- the average weekly trading volume of our common stock on NASDAQ during the four calendar weeks preceding the filing of a Notice of Proposed Sale of Securities pursuant to Rule 144 with respect to the sale.

Sales under Rule 144 by our affiliates are also subject to manner of sale provisions and notice requirements and to the availability of current public information about us.

Upon expiration of the 180-day lock-up period described below, 7,880,745 shares of our common stock will be eligible for sale under Rule 144. We cannot estimate the number of shares of our common stock that our existing stockholders will elect to sell under Rule 144.

Rule 701

In general, under Rule 701 of the Securities Act, any of an issuer's employees, directors, officers, consultants or advisors who purchases shares from the issuer in connection with a compensatory stock or option plan or other written agreement before the effective date of a registration statement under the Securities Act, is entitled to sell such shares 90 days after such effective date in reliance on Rule 144. An affiliate of the issuer can resell shares in reliance on Rule 144 without having to comply with the holding period requirement, and non-affiliates of the issuer can resell shares in reliance on Rule 144 without having to comply with the current public information and holding period requirements.

Lock-up Agreements

We, along with our directors and executive officers and substantially all of our other stockholders have agreed with the underwriters that, for a period of 180 days following the date of this prospectus, we or they will not offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise dispose of any shares of our common stock (including any shares issued in this offering or other issuer-directed shares), or any options or warrants to purchase any shares of our common stock, or any securities convertible into, exchangeable for or that represent the right to receive shares of our common stock, whether now owned or later acquired, owned directly or with respect to which we or they have beneficial ownership within the rules and regulations of the SEC, subject to specified exceptions. The underwriters may, in their sole discretion, at any time without prior notice, release all or any portion of the shares from the restrictions in any such agreement.

Equity Incentive Plans

We intend to file one or more registration statements on Form S-8 under the Securities Act to register all shares of common stock subject to outstanding stock options and common stock issuable under our equity incentive plans. We expect to file the registration statement covering such shares shortly after the date of this prospectus, permitting the resale of such shares by non-affiliates in the public market without restriction under the Securities Act and the sale by affiliates in the public market, subject to compliance with the resale provisions of Rule 144. For more information on our equity incentive plans, see "Executive and Director Compensation—Equity Benefit Plans."

Registration Rights

Holders of 8,087,675 shares of our convertible preferred stock, common stock, and common stock issuable upon exercise of the Bayer Warrant, have the right to demand that we file a registration statement or request that we cover their shares by a registration statement that we otherwise file. For more information, see “Description of Capital Stock—Registration Rights.” Except for shares purchased by affiliates, registration of their shares under the Securities Act would result in these shares becoming freely tradable without restriction under the Securities Act immediately upon the effectiveness of the registration statement, subject to the expiration of the lock-up period and to the extent these shares have been released from any repurchase option that we may hold.

MATERIAL U.S. FEDERAL INCOME TAX CONSEQUENCES TO NON-U.S. HOLDERS

The following summary describes the material U.S. federal income and estate tax consequences of the acquisition, ownership and disposition of our common stock acquired in this offering by Non-U.S. Holders (as defined below). This discussion does not address all aspects of U.S. federal income and estate taxes and does not deal with foreign, state and local consequences that may be relevant to Non-U.S. Holders in light of their particular circumstances, nor does it address U.S. federal tax consequences other than income and estate taxes. Special rules different from those described below may apply to certain Non-U.S. Holders that are subject to special treatment under the Code such as financial institutions, insurance companies, tax-exempt organizations, broker-dealers and traders in securities, U.S. expatriates, "controlled foreign corporations," "passive foreign investment companies," corporations that accumulate earnings to avoid U.S. federal income tax, persons that hold our common stock as part of a "straddle," "hedge," "conversion transaction," "synthetic security" or integrated investment or other risk reduction strategy, partnerships and other pass-through entities, and investors in such pass-through entities. Such Non-U.S. Holders are urged to consult their own tax advisors to determine the U.S. federal, state, local and other tax consequences that may be relevant to them. Furthermore, the discussion below is based upon the provisions of the Code, and Treasury regulations, rulings and judicial decisions thereunder as of the date hereof, and such authorities may be repealed, revoked or modified, perhaps retroactively, so as to result in U.S. federal income and estate tax consequences different from those discussed below. We have not requested a ruling from the U.S. Internal Revenue Service, or IRS, with respect to the statements made and the conclusions reached in the following summary, and there can be no assurance that the IRS will agree with such statements and conclusions. This discussion assumes that the Non-U.S. Holder holds our common stock as a "capital asset" within the meaning of Section 1221 of the Code (generally, property held for investment).

The following discussion is for general information only and is not tax advice. Persons considering the purchase of our common stock pursuant to this offering should consult their own tax advisors concerning the U.S. federal income and estate tax consequences of acquiring, owning and disposing of our common stock in light of their particular situations as well as any consequences arising under the laws of any other taxing jurisdiction, including any state, local or foreign tax consequences.

For the purposes of this discussion, a "Non-U.S. Holder" is, for U.S. federal income tax purposes, a beneficial owner of common stock that is neither a U.S. Holder, a partnership (or other entity treated as a partnership for U.S. federal income tax purposes regardless of its place of organization or formation), nor an entity that is treated as a disregarded entity for U.S. federal income tax purposes (regardless of its place of organization or formation). A "U.S. Holder" means a beneficial owner of our common stock that is for U.S. federal income tax purposes (a) an individual who is a citizen or resident of the United States, (b) a corporation or other entity treated as a corporation created or organized in or under the laws of the United States, any state thereof or the District of Columbia, (c) an estate the income of which is subject to U.S. federal income taxation regardless of its source or (d) a trust if it (1) is subject to the primary supervision of a court within the United States and one or more U.S. persons have the authority to control all substantial decisions of the trust or (2) has a valid election in effect under applicable U.S. Treasury regulations to be treated as a U.S. person.

Distributions

Subject to the discussion below, distributions, if any, made on our common stock to a Non-U.S. Holder of our common stock to the extent made out of our current or accumulated earnings

and profits (as determined under U.S. federal income tax principles) generally will constitute dividends for U.S. tax purposes and will be subject to withholding tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. To obtain a reduced rate of withholding under a treaty, a Non-U.S. Holder generally will be required to provide us with a properly executed IRS Form W-8BEN, or other appropriate form, certifying the Non-U.S. Holder's entitlement to benefits under that treaty. In the case of a Non-U.S. Holder that is an entity, Treasury regulations and the relevant tax treaty provide rules to determine whether, for purposes of determining the applicability of a tax treaty, dividends will be treated as paid to the entity or to those holding an interest in that entity. If a Non-U.S. Holder holds stock through a financial institution or other agent acting on the holder's behalf, the holder will be required to provide appropriate documentation to such agent. The holder's agent will then be required to provide certification to us or our paying agent, either directly or through other intermediaries. If a Non-U.S. Holder is eligible for a reduced rate of U.S. federal withholding tax under an income tax treaty, the Non-U.S. Holder should contact its tax advisor regarding the possibility of obtaining a refund or credit of any excess amounts withheld by timely filing an appropriate claim for a refund with the IRS.

We generally are not required to withhold tax on dividends paid to a Non-U.S. Holder that are effectively connected with the Non-U.S. Holder's conduct of a trade or business within the United States (and, if required by an applicable income tax treaty, are attributable to a permanent establishment that such holder maintains in the United States) if a properly executed IRS Form W-8ECI, stating that the dividends are so connected, is furnished to us (or, if stock is held through a financial institution or other agent, to such agent). In general, such effectively connected dividends will be subject to U.S. federal income tax, on a net income basis at the regular graduated rates, unless a specific treaty exemption applies. A corporate Non-U.S. Holder receiving effectively connected dividends may also be subject to an additional "branch profits tax," which is imposed, under certain circumstances, at a rate of 30% (or such lower rate as may be specified by an applicable treaty) on the corporate Non-U.S. Holder's effectively connected earnings and profits, subject to certain adjustments.

To the extent distributions on our common stock, if any, exceed our current and accumulated earnings and profits, they will constitute a non-taxable return of capital and will first reduce the Non-U.S. Holder's adjusted basis in our common stock, but not below zero, and then will be treated as gain and taxed in the same manner as gain realized from a sale or other disposition of common stock as described in the next section.

Gain on Disposition of Our Common Stock

Subject to the discussion below, a Non-U.S. Holder generally will not be subject to U.S. federal income tax with respect to gain realized on a sale or other disposition of our common stock unless (a) the gain is effectively connected with a trade or business of such holder in the United States (and, if required by an applicable income tax treaty, is attributable to a permanent establishment that such holder maintains in the United States), (b) the Non-U.S. Holder is a nonresident alien individual and is present in the United States for 183 or more days in the taxable year of the disposition and certain other conditions are met, or (c) we are or have been a "United States real property holding corporation" within the meaning of Code Section 897(c)(2) at any time within the shorter of the five-year period preceding such disposition or such holder's holding period. In general, we would be a United States real property holding corporation if interests in U.S. real estate comprised (by fair market value) at least half of our business assets. We believe that we are not, and do not anticipate becoming, a United States real property holding corporation. Even if we are treated as a United States real property holding corporation, gain realized by a Non-U.S. Holder on a disposition of our common stock will not be subject to

U.S. federal income tax so long as (1) the Non-U.S. Holder owned, directly, indirectly and constructively, no more than 5% of our common stock at all times within the shorter of (i) the five-year period preceding the disposition or (ii) the holder's holding period and (2) our common stock is regularly traded on an established securities market. There can be no assurance that our common stock will qualify as regularly traded on an established securities market.

If you are a Non-U.S. Holder described in (a) above, you will be required to pay tax on the net gain derived from the sale at regular graduated U.S. federal income tax rates, unless a specific treaty exemption applies, and corporate Non-U.S. Holders described in (a) above may be subject to the additional branch profits tax at a 30% rate or such lower rate as may be specified by an applicable income tax treaty. If you are an individual Non-U.S. Holder described in (b) above, you will be required to pay a flat 30% tax on the gain derived from the sale, which gain may be offset by U.S. source capital losses (even though you are not considered a resident of the United States).

Information Reporting Requirements and Backup Withholding

Generally, we must report information to the IRS with respect to any dividends we pay on our common stock including the amount of any such dividends, the name and address of the recipient, and the amount, if any, of tax withheld. A similar report is sent to the holder to whom any such dividends are paid. Pursuant to tax treaties or certain other agreements, the IRS may make its reports available to tax authorities in the recipient's country of residence.

Dividends paid by us (or our paying agents) to a Non-U.S. Holder may also be subject to U.S. backup withholding. U.S. backup withholding generally will not apply to a Non-U.S. Holder who provides a properly executed IRS Form W-8BEN or otherwise establishes an exemption. The current backup withholding rate is 28%.

Under current U.S. federal income tax law, U.S. information reporting and backup withholding requirements generally will apply to the proceeds of a disposition of our common stock effected by or through a U.S. office of any broker, U.S. or foreign, except that information reporting and such requirements may be avoided if the holder provides a properly executed IRS Form W-8BEN or otherwise meets documentary evidence requirements for establishing Non-U.S. Holder status or otherwise establishes an exemption. Generally, U.S. information reporting and backup withholding requirements will not apply to a payment of disposition proceeds to a Non-U.S. Holder where the transaction is effected outside the United States through a non-U.S. office of a non-U.S. broker. Information reporting and backup withholding requirements may, however, apply to a payment of disposition proceeds if the broker has actual knowledge, or reason to know, that the holder is, in fact, a U.S. person. For information reporting purposes, certain brokers with substantial U.S. ownership or operations will generally be treated in a manner similar to U.S. brokers.

Backup withholding is not an additional tax. A holder subject to backup withholding should contact the holder's tax advisor regarding the possibility of obtaining a refund or a tax credit and any associated requirements to provide information to the IRS or other relevant tax authority.

Legislation Affecting Taxation of Our Common Stock Held by or Through Foreign Entities

The Foreign Account Tax Compliance Act, or FATCA, which was enacted in 2010, imposes a 30% withholding tax on certain types of payments made to "foreign financial institutions" and certain other non-U.S. entities unless certain due diligence, reporting, withholding, and certification requirements are satisfied.

As a general matter, FATCA imposes a 30% withholding tax on dividends on, and gross proceeds from the sale or other disposition of, our common stock if paid to a foreign entity unless either (i) the foreign entity is a “foreign financial institution” that undertakes certain due diligence, reporting, withholding, and certification obligations, (ii) the foreign entity is not a “foreign financial institution” and identifies certain of its U.S. investors, or (iii) the foreign entity otherwise is excepted under FATCA.

Pursuant to the delayed effective dates provided for in the final regulations, the required withholding with respect to dividends on our common stock began on July 1, 2014 and the required withholding with respect to gross proceeds from a sale or other disposition of our common stock will begin on January 1, 2017.

If withholding is required under FATCA on a payment related to our common stock, investors that otherwise would not be subject to withholding (or that otherwise would be entitled to a reduced rate of withholding) generally will be required to seek a refund or credit from the IRS to obtain the benefit of such exemption or reduction (provided that such benefit is available). Prospective investors should consult their tax advisors regarding the effect of FATCA in their particular circumstances.

Federal Estate Tax

An individual Non-U.S. Holder who is treated as the owner of, or has made certain lifetime transfers of, an interest in our common stock will be required to include the value thereof in his or her gross estate for U.S. federal estate tax purposes, and may be subject to U.S. federal estate tax unless an applicable estate tax treaty provides otherwise, even though such individual was not a citizen or resident of the United States at the time of his or her death.

THE PRECEDING DISCUSSION OF U.S. FEDERAL INCOME AND ESTATE TAX CONSIDERATIONS IS FOR GENERAL INFORMATION ONLY. IT IS NOT TAX ADVICE. EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN TAX ADVISOR REGARDING THE TAX CONSEQUENCES OF PURCHASING, HOLDING AND DISPOSING OF OUR COMMON STOCK, INCLUDING THE CONSEQUENCES OF ANY PROPOSED CHANGE IN APPLICABLE LAW.

UNDERWRITING

Subject to the terms and conditions of the underwriting agreement, the underwriters named below, through their representatives Deutsche Bank Securities Inc. and Jefferies LLC, have severally agreed to purchase from us the following respective numbers of shares of common stock at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus:

Underwriters	Number of Shares
Deutsche Bank Securities Inc.	
Jefferies LLC	
JMP Securities LLC	
Wedbush Securities Inc.	
Total	4,300,000

The underwriting agreement provides that the obligations of the several underwriters to purchase the shares of common stock offered hereby are subject to certain conditions precedent and that the underwriters will purchase all of the shares of common stock offered by this prospectus, other than those covered by the over-allotment option described below, if any of these shares are purchased.

We have been advised by the representatives of the underwriters that the underwriters propose to offer the shares of common stock to the public at the public offering price set forth on the cover of this prospectus and to dealers at a price that represents a concession not in excess of $ per share under the public offering price. After the initial public offering, the representatives of the underwriters may change the offering price and other selling terms.

We have granted to the underwriters an option, exercisable not later than 30 days after the date of this prospectus, to purchase up to 645,000 additional shares of common stock at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus. The underwriters may exercise this option only to cover over-allotments made in connection with the sale of the common stock offered by this prospectus. To the extent that the underwriters exercise this option, each of the underwriters will become obligated, subject to certain conditions, to purchase approximately the same percentage of these additional shares of common stock as the number of shares of common stock to be purchased by it in the above table bears to the total number of shares of common stock offered by this prospectus. We will be obligated, pursuant to this option, to sell these additional shares of common stock to the underwriters to the extent the option is exercised. If any additional shares of common stock are purchased, the underwriters will offer the additional shares on the same terms as those on which the other shares are being offered.

The underwriting discounts and commissions per share are equal to the public offering price per share of common stock less the amount paid by the underwriters to us per share of common stock. The underwriting discounts and commissions are % of the initial public offering price. We have agreed to pay the underwriters the following discounts and commissions, assuming either no exercise or full exercise by the underwriters of the underwriters' over-allotment option:

		Total Fees	
	Fee per share	Without Exercise of Over-Allotment Option	With Full Exercise of Over-Allotment Option
Discounts and commissions paid by us	$	$	$

In addition, we estimate that our share of the total expenses of this offering, excluding underwriting discounts and commissions, will be approximately $4,000,000.

We have agreed to indemnify the underwriters against some specified types of liabilities, including liabilities under the Securities Act, and to contribute to payments the underwriters may be required to make in respect of any of these liabilities.

Each of our officers and directors, and substantially all of our stockholders and holders of options and warrants to purchase our stock, have agreed not to, directly or indirectly, offer, sell, pledge, contract to sell (including any short sale), grant any option to purchase or otherwise transfer or dispose of any shares of common stock (including, without limitation, shares of our common stock which may be deemed to be beneficially owned by them currently or hereafter in accordance with the rules and regulations of the SEC, shares of our common stock which may be issued upon exercise of a stock option or warrant and any other security convertible into or exchangeable for common stock), enter into any short sale or any purchase, sale or grant of any right (including, without limitation, any put or call option) with respect to any security (other than a broad-based market basket or index) that includes, relates to or derives any significant part of its value from our common stock, or publicly announce any intention to do so, for a period of 180 days after the effective date of the registration statement of which this prospectus is a part, or the lock-up period, without the prior written consent of Deutsche Bank Securities Inc. and Jefferies LLC.

Transfers or dispositions can be made during the lock-up period if such transfer does not trigger any filing or reporting requirement under Section 16(a) of the Exchange Act and if made by gift, will or intestacy, for estate planning purposes, to an affiliated entity or to the company to cover withholding obligations in connection with the exercise of options or the payment of the exercise price for such options, provided that the transferee executes an agreement stating that the transferee is receiving and holding the securities subject to the foregoing restrictions. We have entered into a similar agreement with the representatives of the underwriters. There are no agreements between the representatives and any of our stockholders or affiliates releasing them from these lock-up agreements prior to the expiration of the lock-up period.

The representatives of the underwriters have advised us that the underwriters do not intend to confirm sales to any account over which they exercise discretionary authority.

In connection with the offering, the underwriters may purchase and sell shares of our common stock in the open market. These transactions may include short sales, purchases to cover positions created by short sales and stabilizing transactions.

Short sales involve the sale by the underwriters of a greater number of shares than they are required to purchase in the offering. Covered short sales are sales made in an amount not greater than the underwriters' over-allotment option. The underwriters may close out any covered short position by either exercising their over-allotment option or purchasing shares in the open market. In determining the source of shares to close out the covered short position, the underwriters will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which they may purchase shares through their over-allotment option.

Naked short sales are any sales in excess of the over-allotment option. The underwriters must close out any naked short position by purchasing shares in the open market. A naked short position is more likely to be created if underwriters are concerned that there may be downward pressure on the price of the shares in the open market prior to the completion of the offering.

Stabilizing transactions consist of various bids for or purchases of our common stock made by the underwriters in the open market prior to the completion of the offering.

The underwriters may impose a penalty bid. This occurs when a particular underwriter repays to the other underwriters a portion of the underwriting discount received by it because the representatives of the underwriters have repurchased shares sold by or for the account of that underwriter in stabilizing or short covering transactions.

Purchases to cover a short position and stabilizing transactions may have the effect of preventing or slowing a decline in the market price of our common stock. Additionally, these purchases, along with the imposition of the penalty bid, may stabilize, maintain or otherwise affect the market price of our common stock. As a result, the price of our common stock may be higher than the price that might otherwise exist in the open market. These transactions may be effected on the NASDAQ Global Market, in the over-the-counter market or otherwise.

A prospectus in electronic format is being made available on Internet web sites maintained by one or more of the underwriters of this offering. Other than the prospectus in electronic format, the information on any underwriter's web site and any information contained in any other web site maintained by an underwriter is not part of the prospectus or the registration statement of which the prospectus forms a part.

Pricing of this Offering

Prior to this offering, there has been no public market for our common stock. Consequently, the initial public offering price of our common stock will be determined by negotiation among us and the representatives of the underwriters. Among the primary factors that will be considered in determining the public offering price are:

- prevailing market conditions;
- our results of operations in recent periods;
- the present stage of our development;
- the market capitalizations and stages of development of other companies that we and the representatives of the underwriters believe to be comparable to our business; and
- estimates of our business potential.

Selling Restrictions

European Economic Area

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive, or a Relevant Member State, an offer to the public of any shares of our common stock may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of any shares of our common stock may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

- to any legal entity which is a qualified investor as defined in the Prospectus Directive;
- to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representatives for any such offer; or

- in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of shares of our common stock shall result in a requirement for the publication by us or any underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer to the public" in relation to any shares of our common stock in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any shares of our common stock to be offered so as to enable an investor to decide to purchase any shares of our common stock, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, the expression "Prospectus Directive" means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in the Relevant Member State, and the expression "2010 PD Amending Directive" means Directive 2010/73/EU.

United Kingdom

Each underwriter has represented and agreed that:

- it has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000, as amended, or the FSMA, received by it in connection with the issue or sale of the shares of our common stock in circumstances in which Section 21(1) of the FSMA does not apply to us; and
- it has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the shares of our common stock in, from or otherwise involving the United Kingdom.

Hong Kong

The shares may not be offered or sold by means of any document other than (i) in circumstances which do not constitute an offer to the public within the meaning of the Companies Ordinance (Cap.32, Laws of Hong Kong), or (ii) to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap.571, Laws of Hong Kong) and any rules made thereunder, or (iii) in other circumstances which do not result in the document being a "prospectus" within the meaning of the Companies Ordinance (Cap.32, Laws of Hong Kong), and no advertisement, invitation, or document relating to the shares may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere), which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the laws of Hong Kong) other than with respect to shares which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" within the meaning of the Securities and Futures Ordinance (Cap. 571, Laws of Hong Kong) and any rules made thereunder.

Singapore

This prospectus has not been registered as a prospectus with the Monetary Authority of Singapore. Accordingly, this prospectus and any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the shares may not be circulated or distributed, nor may the shares be offered or sold, or be made the subject of an invitation for subscription or purchase, whether directly or indirectly, to persons in Singapore other than (i) to

an institutional investor under Section 274 of the Securities and Futures Act, Chapter 289 of Singapore, or the SFA, (ii) to a relevant person, or any person pursuant to Section 275(1A), and in accordance with the conditions, specified in Section 275 of the SFA, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the shares are subscribed or purchased under Section 275 by a relevant person which is: (a) a corporation (which is not an accredited investor) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or (b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary is an accredited investor, shares, debentures and units of shares, and debentures of that corporation, or the beneficiaries' rights and interest in that trust shall not be transferable for six months after that corporation or that trust has acquired the shares under Section 275 except: (1) to an institutional investor under Section 274 of the SFA or to a relevant person, or any person pursuant to Section 275(1A), and in accordance with the conditions, specified in Section 275 of the SFA; (2) where no consideration is given for the transfer; or (3) by operation of law.

Japan

The securities have not been and will not be registered under the Financial Instruments and Exchange Law of Japan (the Financial Instruments and Exchange Law) and each underwriter has agreed that it will not offer or sell any securities, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to a resident of Japan, except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and Exchange Law and any other applicable laws, regulations and ministerial guidelines of Japan.

Switzerland

The shares may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange, or the SIX, or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the shares or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, the company or the shares have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of shares will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA, and the offer of shares has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes, or CISA. The investor protection afforded to acquirers of interests in collective investment schemes under the CISA does not extend to acquirers of shares.

Dubai International Financial Centre

This prospectus relates to an Exempt Offer in accordance with the Offered Securities Rules of the Dubai Financial Services Authority, or the DFSA. This prospectus is intended for distribution only to persons of a type specified in the Offered Securities Rules of the DFSA. It

must not be delivered to, or relied on by, any other person. The DFSA has no responsibility for reviewing or verifying any documents in connection with Exempt Offers. The DFSA has not approved this prospectus nor taken steps to verify the information set forth herein and has no responsibility for the prospectus. The shares to which this prospectus relates may be illiquid and/or subject to restrictions on their resale. Prospective purchasers of the shares offered should conduct their own due diligence on the shares. If you do not understand the contents of this prospectus you should consult an authorized financial advisor.

Qatar

In the State of Qatar, the offer contained herein is made on an exclusive basis to the specifically intended recipient thereof, upon that person's request and initiative, for personal use only and shall in no way be construed as a general offer for the sale of securities to the public or an attempt to do business as a bank, an investment company or otherwise in the State of Qatar. This prospectus and the underlying securities have not been approved or licensed by the Qatar Central Bank or the Qatar Financial Centre Regulatory Authority or any other regulator in the State of Qatar. The information contained in this prospectus shall only be shared with any third parties in Qatar on a need to know basis for the purpose of evaluating the contained offer. Any distribution of this prospectus by the recipient to third parties in Qatar beyond the terms hereof is not permitted and shall be at the liability of such recipient.

Australia

No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission, or the ASIC, in relation to the offering. This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001, or the Corporations Act, and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the shares may only be made to persons, or the exempt investors, who are "sophisticated investors" (within the meaning of section 708(8) of the Corporations Act), "professional investors" (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the shares without disclosure to investors under Chapter 6D of the Corporations Act.

The shares applied for by exempt investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring shares must observe such Australian on-sale restrictions.

This prospectus contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

LEGAL MATTERS

The validity of the shares of our common stock to be issued in this offering will be passed upon for us by our counsel, Hogan Lovells US LLP, Menlo Park, California. Certain legal matters relating to this offering will be passed upon for the underwriters by Cooley LLP, San Francisco, California.

EXPERTS

The consolidated financial statements as of December 31, 2012 and 2013, and for the years then ended, and for the period from October 11, 2005 (date of inception) to December 31, 2013, included in this prospectus, have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report appearing herein (which report expresses an unqualified opinion on the consolidated financial statements and includes an explanatory paragraph referring to our ability to continue as a going concern). Such consolidated financial statements have been so included in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the shares of our common stock offered by this prospectus. This prospectus, which constitutes part of that registration statement, does not contain all of the information set forth in the registration statement or the accompanying exhibits and schedules. Some items included in the registration statement are omitted from this prospectus in accordance with the rules and regulations of the SEC. For further information with respect to us and the common stock offered in this prospectus, we refer you to the registration statement and the accompanying exhibits and schedules. Statements contained in this prospectus regarding the contents of any contract, agreement or any other document are summaries of the material terms of these contracts, agreements or other documents. With respect to each of these contracts, agreements or other documents filed as an exhibit to the registration statement, reference is made to such exhibit for a more complete description of the matter involved.

A copy of the registration statement and the accompanying exhibits and schedules and any other document we file may be inspected without charge and copied at the SEC's public reference room at 100 F Street, N.E., Washington, D.C. 20549. The public may obtain information on the operation of the public reference room by calling the SEC at 1-800-SEC-0330. The SEC maintains a website that contains reports, proxy and information statements and other information regarding registrants that file electronically with the SEC. The address of the SEC's website is http://www.sec.gov.

Upon completion of this offering, we will become subject to the information and periodic reporting requirements of the Exchange Act, and we will file periodic reports, proxy statements and other information with the SEC. These periodic reports, proxy statements and other information will be available for inspection and copying at the public reference room and website of the SEC referred to above. We maintain a website at http://www.syndax.com. You may access our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports, proxy statements and other information filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The information contained in, or that can be accessed through, our website is not part of this prospectus.

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders of
Syndax Pharmaceuticals, Inc.
Waltham, Massachusetts

We have audited the accompanying consolidated balance sheets of Syndax Pharmaceuticals, Inc. and its subsidiary (a development stage company) (the "Company") as of December 31, 2012 and 2013, and the related consolidated statements of operations and comprehensive loss, convertible preferred stock and stockholders' deficit, and cash flows for the years then ended, and for the period from October 11, 2005 (date of inception) to December 31, 2013. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of Syndax Pharmaceuticals, Inc. and subsidiary as of December 31, 2012 and 2013, and the results of their operations and their cash flows for the years then ended, and for the period from October 11, 2005 (date of inception) to December 31, 2013, in conformity with accounting principles generally accepted in the United States of America.

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. The Company is a development stage company engaged in the development and commercialization of therapeutics in oncology. As discussed in Note 1 to the consolidated financial statements, the Company has recurring losses from operations and an accumulated deficit as of December 31, 2013, which raise substantial doubt about its ability to continue as a going concern. Management's plans related to these matters are also described in Note 1 to the consolidated financial statements. The consolidated financial statements do not include any adjustments that might result from the outcome of any of these uncertainties.

/s/ Deloitte & Touche LLP

Boston, Massachusetts
February 28, 2014 (June 4, 2014 as to the effects of the reverse stock split described in Note 18)

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)

CONSOLIDATED BALANCE SHEETS
(In thousands, except share and per share data)

	December 31, 2012	December 31, 2013
ASSETS		
Current assets:		
Cash and cash equivalents	$ 537	$ 10,104
Restricted cash	83	50
Short-term investments	—	4,022
Short-term deposits	91	138
Prepaid expenses and other current assets	24	230
Total current assets	735	14,544
Property and equipment, net	20	40
Other assets	755	2,477
Total assets	$ 1,510	$ 17,061
LIABILITIES, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT		
Current liabilities:		
Current portion of convertible notes	$ 16,921	$ —
Current portion of long-term debt	4,422	—
Accounts payable	776	1,077
Accrued expenses	2,698	1,653
Embedded derivative liability	287	—
Total current liabilities	25,104	2,730
Long-term liabilities:		
Common stock warrant liability	3,880	2,482
Convertible preferred stock warrant liability	1,814	—
Total long-term liabilities	5,694	2,482
Total liabilities	30,798	5,212
Commitments (Note 15)		
Convertible preferred stock (Note 9)	49,000	140,324
Stockholders' deficit:		
Series A convertible preferred stock, $0.001 par value, 4,390,243 shares authorized at December 31, 2013; none and 875,545 shares issued and outstanding at December 31, 2012 and 2013, respectively	—	7,231
Common stock, $0.0001 par value, 975,609 shares authorized at December 31, 2012; 9,837,398 shares authorized at December 31, 2013; and 50,397 and 70,722 shares issued and outstanding at December 31, 2012 and 2013, respectively	—	1
Additional paid-in capital	766	—
Deficit accumulated during the development stage	(79,054)	(135,707)
Total stockholders' deficit	(78,288)	(128,475)
Total liabilities, convertible preferred stock and stockholders' deficit	$ 1,510	$ 17,061

The accompanying notes are an integral part of these consolidated financial statements.

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)

CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(In thousands, except share and per share data)

	Years Ended December 31,		Period From October 11, 2005 (Date of Inception) to December 31, 2013
	2012	2013	
Operating expenses:			
Research and development	$ 5,240	$ 3,208	$ 52,040
General and administrative	3,494	5,363	27,620
Total operating expenses	8,734	8,571	79,660
Other (expense) income:			
Interest expense, net	(4,673)	(771)	(7,436)
Change in fair value of common stock warrant liability	(431)	(1,943)	(3,375)
Change in fair value of convertible preferred stock warrant liability	669	128	415
Change in fair value of tranche liability	—	(3,144)	(3,144)
Change in fair value of embedded derivative	3,205	—	1,530
Other (expense) income	(1)	130	119
Total other (expense) income	(1,231)	(5,600)	(11,891)
Net loss and comprehensive loss	(9,965)	(14,171)	(91,551)
Convertible preferred stock preferences and convertible extinguishments (Note 2)	—	(46,283)	(48,632)
Net loss attributable to common stockholders	$ (9,965)	$ (60,454)	$ (140,183)
Net loss per share attributable to common stockholders—basic and diluted	$ (197.73)	$ (1,139.14)	
Weighted-average common shares outstanding—basic and diluted	50,397	53,070	
Pro forma net loss per share attributable to common stockholders—basic and diluted (unaudited)		$ (1.55)	
Pro forma weighted-average common shares used in net loss per share applicable to common stockholders—basic and diluted (unaudited)		5,714,129	

The accompanying notes are an integral part of these consolidated financial statements.

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)

CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT
(In thousands, except share and per share data)

	Convertible Preferred Stock $0.001 Par Value		Series A Convertible Preferred Stock $0.001 Par Value		Common Stock $0.0001 Par Value		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Deficit Accumulated During the Development Stage	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount	Shares	Amount				
DATE OF INCEPTION—OCTOBER 11, 2005	—	$ —	—	$ —	—	$ —	$ —	$ —	$ —	$ —
Issuance of common stock to founders in 2005	—	—	—	—	42,680	—	—	—	—	—
Net loss	—	—	—	—	—	—	—	—	(154)	(154)
BALANCE—DECEMBER 31, 2005	—	—	—	—	42,680	—	—	—	(154)	(154)
Net loss	—	—	—	—	—	—	—	—	(2,777)	(2,777)
BALANCE—DECEMBER 31, 2006	—	—	—	—	42,680	—	—	—	(2,931)	(2,931)
Issuance Series A convertible preferred stock in March 2007, net of issuance costs of $77	147,414	16,423	—	—	—	—	—	—	—	—
Accretion of issuance costs on convertible preferred stock	—	77	—	—	—	—	(77)	—	—	(77)
Conversion of notes payable into Series A convertible preferred stock	31,269	3,500	—	—	—	—	—	—	—	—
Issuance of common stock as partial consideration for intellectual property	—	—	—	—	6,355	—	78	—	—	78
Repurchase of common stock from founder	—	—	—	—	—	—	—	—	—	—
Common stock warrant issued as partial consideration of intellectual property	—	—	—	—	—	—	57	—	—	57
Stock-based compensation expense	—	—	—	—	—	—	112	—	—	112
Unrealized gain on short-term investments	—	—	—	—	—	—	—	21	—	21
Net loss	—	—	—	—	—	—	—	—	(9,622)	(9,622)
BALANCE—DECEMBER 31, 2007	178,683	20,000	—	—	49,035	—	170	21	(12,553)	(12,362)
Issuance Series A convertible preferred stock in August and October 2008, net of issuance costs of $39	178,683	19,961	—	—	—	—	—	—	—	—
Accretion of issuance costs on convertible preferred stock	—	39	—	—	—	—	(39)	—	—	(39)
Exercise of common stock options	—	—	—	—	1,295	—	43	—	—	43
Stock-based compensation expense	—	—	—	—	—	—	82	—	—	82
Unrealized gain on short-term investments	—	—	—	—	—	—	—	54	—	54
Net loss	—	—	—	—	—	—	—	—	(10,632)	(10,632)
BALANCE—DECEMBER 31, 2008	357,366	40,000	—	—	50,330	—	256	75	(23,185)	(22,854)

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)

CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT—(Continued)
(In thousands, except share and per share data)

	Convertible Preferred Stock $0.001 Par Value		Series A Convertible Preferred Stock $0.001 Par Value		Common Stock $0.0001 Par Value		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Deficit Accumulated During the Development Stage	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount	Shares	Amount				
Stock-based compensation expense	—	—	—	—	—	—	184	—	—	184
Unrealized loss on short-term investments	—	—	—	—	—	—	—	(75)	—	(75)
Net loss	—	—	—	—	—	—	—	—	(16,313)	(16,313)
BALANCE—DECEMBER 31, 2009	357,366	40,000	—	—	50,330	—	440	—	(39,498)	(39,058)
Issuance of Series A convertible preferred stock in January 2010, net of amounts allocated to detachable warrants of $2,103 and issuance costs of $130	80,407	6,767	—	—	—	—	—	—	—	—
Accretion of issuance costs on convertible preferred stock	—	130	—	—	—	—	(130)	—	—	(130)
Accretion to redemption value of convertible preferred stock	—	2,103	—	—	—	—	(427)	—	(1,676)	(2,103)
Issuance of Series A warrants	—	—	—	—	—	—	5	—	—	5
Issuance of common stock warrants	—	—	—	—	—	—	6	—	—	6
Exercise of common stock options	—	—	—	—	67	—	1	—	—	1
Stock-based compensation expense	—	—	—	—	—	—	186	—	—	186
Unrealized loss on short-term investments	—	—	—	—	—	—	—	(1)	—	(1)
Net loss	—	—	—	—	—	—	—	—	(14,661)	(14,661)
BALANCE—DECEMBER 31, 2010	437,773	49,000	—	—	50,397	—	81	(1)	(55,835)	(55,755)
Issuance of common warrants for cash	—	—	—	—	—	—	3	—	—	3
Stock-based compensation expense	—	—	—	—	—	—	118	—	—	118
Beneficial feature in convertible notes payable to stockholders	—	—	—	—	—	—	425	—	—	425
Unrealized gain on short-term investments	—	—	—	—	—	—	—	1	—	1
Net loss	—	—	—	—	—	—	—	—	(13,254)	(13,254)
BALANCE—DECEMBER 31, 2011	437,773	49,000	—	—	50,397	—	627	—	(69,089)	(68,462)
Stock-based compensation expense	—	—	—	—	—	—	139	—	—	139
Net loss and comprehensive loss	—	—	—	—	—	—	—	—	(9,965)	(9,965)
BALANCE—DECEMBER 31, 2012	437,773	49,000	—	—	50,397	—	766	—	(79,054)	(78,288)

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)

CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT—(Continued)
(In thousands, except share and per share data)

	Convertible Preferred Stock $0.001 Par Value		Series A Convertible Preferred Stock $0.001 Par Value		Common Stock $0.0001 Par Value		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Deficit Accumulated During the Development Stage	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount	Shares	Amount				
Conversion of Series A convertible preferred stock into Series A-1 convertible preferred stock and cancellation of warrants pursuant to the recapitalization (Note 10)	3,939,957	(2,746)	—	—	—	—	4,433	—	—	4,433
Conversion of convertible notes and accrued interest into Series B-1 convertible preferred stock and cancellation of warrants and forced conversion into Series B convertible preferred stock pursuant to the recapitalization (Note 10)	1,753,850	18,702	—	—	—	—	4,425	—	—	4,425
Issuance of Series B-1 convertible preferred stock:										
In March 2013, net of offering costs of $626 and tranche obligation of $206	118,370	493	—	—	—	—	—	—	—	—
In April 2013	98,268	1,100	—	—	—	—	—	—	—	—
In July 2013, net of tranche obligation of $754 and beneficial conversion feature of $452	223,353	1,294	—	—	—	—	—	—	—	—
In August 2013, net of offering costs of $365 and tranche obligation of $1,964 and beneficial conversion feature of $842	605,280	3,604	—	—	—	—	(787)	—	—	(787)
In November 2013, including $7,008 de-recognition of remaining tranche obligation	1,331,180	21,908	—	—	—	—	—	—	—	—
Beneficial conversion feature in Series B-1 convertible preferred stock		—	—	—	—	—	1,295	—	—	1,295
Forced conversion of Series A-1 convertible preferred into Series A convertible preferred stock	(875,545)	(7,231)	875,545	7,231	—	—	—	—	—	7,231
Extinguishment and modification of convertible preferred stock (Note 10)	—	32,366	—	—	—	—	(6,968)	—	(25,552)	(32,520)
Accretion of convertible preferred stock to redemption value	—	17,875	—	—	—	—	(2,609)	—	(15,266)	(17,875)

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)

CONSOLIDATED STATEMENTS OF CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' DEFICIT—(Continued)
(In thousands, except share and per share data)

	Convertible Preferred Stock $0.001 Par Value		Series A Convertible Preferred Stock $0.001 Par Value		Common Stock $0.0001 Par Value		Additional Paid-In Capital	Accumulated Other Comprehensive Income (Loss)	Deficit Accumulated During the Development Stage	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount	Shares	Amount				
Accretion for convertible preferred stock dividends	—	3,959	—	—	—	—	(2,295)	—	(1,664)	(3,959)
Stock-based compensation expense	—	—	—	—	—	—	1,415	—	—	1,415
Issuance of common stock as consideration for license fees	—	—	—	—	20,325	1	325	—	—	326
Net loss and comprehensive loss	—	—	—	—	—	—	—	—	(14,171)	(14,171)
BALANCE—December 31, 2013	7,632,486	$140,324	875,545	$ 7,231	70,722	$ 1	$ —	$ —	$ (135,707)	$ (128,475)

The accompanying notes are an integral part of these consolidated financial statements.

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)

CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Years Ended December 31,		Period From October 11, 2005 (Date of Inception) to December 31, 2013
	2012	2013	
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net loss	$ (9,965)	$ (14,171)	$ (91,551)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation	34	13	317
Stock-based compensation	139	1,415	2,236
Noncash research and development expense	—	326	463
Change in fair value of embedded derivative	(3,205)	—	(1,530)
Change in fair value of tranche liability	—	3,144	3,144
Change in fair value of warrants	(238)	1,815	3,065
Gain recognized on extinguishment of common stock warrants	—	(133)	(133)
Amortization of debt discount	2,941	—	4,583
Amortization of debt issuance and deferred financing costs	186	260	607
Realized gain on short-term investments	—	—	2
Amortization and accretion of investments	—	—	(213)
Loss on sale of property and equipment	1	5	18
Changes in operating assets and liabilities:			
Short-term deposits	17	(77)	(171)
Prepaid expenses and other assets	53	(204)	(229)
Accounts payable	(35)	(286)	490
Accrued expenses and other liabilities	(236)	598	1,788
Accrued interest	1,024	—	1,510
Net cash used in operating activities	(9,284)	(7,295)	(75,604)
CASH FLOWS FROM INVESTING ACTIVITIES:			
Purchases of property and equipment	(11)	(38)	(361)
Proceeds from sale of property and equipment	5	—	7
(Increase) decrease in restricted cash	—	33	(50)
Purchases of short-term investments	—	(4,022)	(41,654)
Proceeds from sales and maturities of short-term investments	500	—	37,844
Net cash provided by (used in) investing activities	494	(4,027)	(4,214)
CASH FLOWS FROM FINANCING ACTIVITIES			
Principal payments on capital lease obligation	(3)	(1)	(22)
Proceeds from issuance of common stock	—	—	45
Proceeds from issuance of convertible preferred stock, net	—	26,116	71,370
Proceeds from issuance of debt	8,065	745	27,166
Deferred issuance costs	(597)	(1,549)	(2,471)
Payments on term loan	(1,756)	(4,422)	(6,180)
Proceeds from issuance of common stock and Series A warrants	—	—	14
Net cash provided by financing activities	5,709	20,889	89,922

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)

CONSOLIDATED STATEMENTS OF CASH FLOWS—(Continued)
(In thousands)

	Years Ended December 31,		Period From October 11, 2005 (Date of Inception) to December 31, 2013
	2012	2013	
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(3,081)	9,567	10,104
CASH AND CASH EQUIVALENTS—beginning of period	3,618	537	—
CASH AND CASH EQUIVALENTS—end of period	$ 537	$ 10,104	$ 10,104
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:			
Interest paid	$ 523	$ 257	$ 1,353
SUPPLEMENTAL DISCLOSURES OF NONCASH FINANCING ACTIVITIES:			
Conversion of Series A convertible preferred stock into Series A-1 convertible preferred stock and cancellation of warrants with fair value of $1,686 pursuant to the recapitalization (Note 10)	$ —	$ 4,433	$ 4,433
Conversion of convertible notes and accrued interest into Series B-1 convertible preferred stock and cancellation of warrants with fair value of $3,341 and forced conversion into Series B convertible preferred stock pursuant to the recapitalization (Note 10)	$ —	$ 23,127	$ 23,127
Extinguishment and modification of convertible preferred stock (Note 10)	$ —	$ 32,520	$ 32,520
Accretion of convertible preferred stock to redemption value	$ —	$ 17,875	$ 17,875
Accretion of dividends on convertible preferred stock	$ —	$ 3,959	$ 3,959
Conversion of notes payable to Series A convertible preferred stock	$ —	$ —	$ 3,500
Offering proceeds allocated to Series A convertible preferred detachable warrants	$ —	$ —	$ 2,103
Note offering proceeds allocated to common stock warrants	$ 1,270	$ —	$ 2,342
Note offering proceeds allocated to embedded derivative liability	$ 572	$ —	$ 1,816
Note offering proceeds allocated to beneficial conversion feature	$ —	$ —	$ 425
Recognition and de-recognition of tranche liability	$ —	$ (3,144)	$ (3,144)
Deposits included in long-term liabilities	$ —	$ —	$ 5
Equipment purchased under capital lease obligations	$ —	$ 13	$ 34
Deferred issuance costs included in accounts payable and accrued expenses	$ —	$ 910	$ 910

The accompanying notes are an integral part of these consolidated financial statements.

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

December 31, 2013

1. Nature of Business and Summary of Significant Accounting Policies

Nature of Business—Syndax Pharmaceuticals, Inc. (the "Company") is a late-stage biopharmaceutical company focused on the development and commercialization of its lead product candidate, entinostat, an epigenetic therapy for treatment-resistant cancers. The Company was incorporated under the laws of the State of Delaware on October 11, 2005 (date of inception) and is headquartered in Waltham, Massachusetts.

Development Stage Company—Since its inception, the Company has devoted its efforts principally to research and development and raising capital. As a result, the Company is considered a development stage company. The Company is subject to risks common to companies in the development stage, including, but not limited to, successful development of therapeutics, obtaining additional funding (discussed further below), protection of proprietary therapeutics, compliance with government regulations, fluctuations in operating results, dependence on key personnel and collaborative partners, and risks associated with industry changes.

Basis of Presentation and Management's Plans—The accompanying consolidated financial statements have been prepared on a going-concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. The Company has incurred net losses since inception and has a deficit accumulated during the development stage of $135.7 million as of December 31, 2013.

The Company has financed its operations to date primarily with the proceeds from the sale of convertible preferred stock and the issuance of notes payable. The Company's long-term success is dependent upon its ability to successfully develop and market entinostat, earn revenue, obtain additional capital when needed, and ultimately, achieve profitable operations. The Company anticipates that it will be several years before entinostat is approved and the Company begins to generate revenue; accordingly, management fully expects to incur substantial losses on the ongoing development of entinostat and does not expect to achieve positive cash flow from operations for at least the next five years. As a result, the Company will continue to require additional capital to move forward with its business plan. While certain amounts of this additional capital were raised during the year ended December 31, 2013, there can be no assurance that funds necessary beyond these amounts will be available in amounts or on terms sufficient to ensure ongoing operations.

The Company's management believes that the December 31, 2013 cash balance will be sufficient to fund the Company's operations through December 31, 2014, and additional capital will be needed thereafter. The foregoing conditions raise substantial doubt about the Company's ability to continue as a going concern for a reasonable period of time. The consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded assets and liabilities that might be necessary should the Company be unable to continue as a going concern. In the event that sufficient funds were not available, management would expect to significantly reduce expenditures to conserve cash, which could involve scaling back or curtailing development activity for entinostat, including clinical trial activity.

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

December 31, 2013

Reverse stock split—The Board of Directors (the "Board") and the stockholders of the Company approved a 1-for-10 reverse stock split of the Company's common stock and convertible preferred stock, which was effected on November 18, 2013. All share and per share data have been retroactively adjusted to give effect to this reverse stock split. Shares of common stock underlying outstanding stock options and other equity instruments were proportionately reduced, and the respective exercise prices, if applicable, were proportionately increased in accordance with the terms of the agreements governing such securities.

Principles of Consolidation—During 2012, the Company established a wholly owned subsidiary in the United Kingdom. There have been no activities for this entity to date. The consolidated financial statements include the accounts of the Company and its wholly owned subsidiary, Syndax Limited.

Use of Estimates—The preparation of consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of costs and expenses during the reporting period. The Company bases estimates and assumptions on historical experience when available and on various factors that it believes to be reasonable under the circumstances. The Company evaluates its estimates and assumptions on an ongoing basis. The Company's actual results may differ from these estimates under different assumptions or conditions.

Cash Equivalents—Cash equivalents include all highly liquid investments maturing within 90 days or less from the date of purchase. Cash equivalents include money market funds, corporate debt securities, and U.S. government agency notes.

Restricted Cash—The Company classifies as restricted cash all cash pledged as collateral to secure long-term obligations and all cash whose use is otherwise limited by contractual provisions. Amounts are reported as non-current unless restrictions are expected to be released in the next 12 months.

Investments—All investments in marketable securities are classified as available-for-sale and are reported at fair value, with unrealized gains and losses excluded from earnings and reported net of tax in accumulated other comprehensive loss, which is a component of stockholders' deficit. Unrealized losses that are determined to be other-than-temporary, based on current and expected market conditions, are recognized in earnings. Declines in fair value determined to be credit related are charged to earnings. The cost of marketable securities sold is determined by the specific identification method. Investments with remaining maturities or that are due within one year from the balance sheet date are classified as current.

Segment Reporting—Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision maker in making decisions regarding resource allocation and assessing performance. The Company has one operating segment.

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
December 31, 2013

Other Assets—Other assets consist of debt issuance costs and deferred issuance costs. Debt issuance costs consist primarily of direct incremental legal and accounting fees relating to the issuance of convertible notes and the term loan. Debt issuance costs are amortized over the life of the related debt instrument, and the amortization of this expense is included in interest expense in the consolidated statements of operations and comprehensive loss. During 2013, the debt issuance costs related to the convertible notes were written-off to interest expense in connection with the recapitalization as discussed in Note 10. Deferred issuance costs, which primarily consist of direct incremental legal and accounting fees relating to the Company's financing efforts, are capitalized as incurred when the financing is considered probable. The deferred issuance costs will be offset against financing proceeds upon the consummation of the offering. In the event the offering is terminated, deferred issuance costs will be expensed.

As of December 31, 2012, the Company had capitalized deferred issuance costs of $0.5 million relating to the Series B-1 financing which closed in March 2013, at which time such costs were reclassified against the Series B-1 proceeds. As of December 31, 2013, the Company had capitalized deferred IPO issuance costs of $2.4 million. Future costs will be deferred until the completion of the IPO, at which time they will be reclassified to additional paid-in capital as a reduction of the IPO proceeds. If the Company terminates its plan for an IPO, any costs deferred will be expensed immediately.

Concentrations of Credit Risk—Cash and cash equivalents, restricted cash, and short-term investments are financial instruments that potentially subject the Company to concentrations of credit risk. Substantially all of the Company's cash, cash equivalents, and short-term investments were deposited in accounts at two financial institutions, and at times, such deposits may exceed federally insured limits. The Company has not experienced any losses in such accounts, and management believes that the Company is not exposed to significant credit risk due to the financial position of the depository institutions in which those deposits are held.

Property and Equipment—Property and equipment are recorded at cost. Depreciation is recorded using the straight-line method over the estimated useful lives of the assets (three to five years). Assets under capital leases are amortized over the shorter of their useful lives or lease term using the straight-line method. Major replacements and improvements are capitalized, while general repairs and maintenance are expensed as incurred.

Impairment of Long-lived Assets—Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of the asset may not be recoverable. When such events occur, the Company compares the carrying amounts of the assets to their undiscounted expected future cash flows. If this comparison indicates that there is impairment, the amount of impairment is calculated as the difference between the carrying value and fair value. To date, no such impairments have been recognized.

Research and Development—Research and development costs are expensed as incurred. Research and development expenses include payroll and personnel expenses, consulting costs, external contract research and development expenses, and allocated overhead, including rent, equipment depreciation, and utilities. Research and development costs that are paid in advance of performance are capitalized as a prepaid expense and amortized over the service period as the services are provided.

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
December 31, 2013

Clinical Trial Costs—Clinical trial costs are a component of research and development expenses. The Company accrues and expenses clinical trial activities performed by third parties based on an evaluation of the progress to completion of specific tasks using data such as patient enrollment, clinical site activations, or other information provided to us by our vendors.

Income Taxes—The Company records deferred tax assets and liabilities for the expected future tax consequences of temporary differences between the Company's financial statement carrying amounts and the tax bases of assets and liabilities and for loss and credit carryforwards using enacted tax rates expected to be in effect in the years in which the differences reverse. A valuation allowance is provided to reduce the net deferred tax assets to the amount that will more likely than not be realized.

The Company determines whether it is more likely than not that a tax position will be sustained upon examination. If it is not more likely than not that a position will be sustained, none of the benefit attributable to the position is recognized. The tax benefit to be recognized for any tax position that meets the more-likely-than-not recognition threshold is calculated as the largest amount that is more than 50% likely of being realized upon resolution of the contingency. The Company accounts for interest and penalties related to uncertain tax positions as part of its provision for income taxes.

Guarantees and Indemnifications—As permitted under Delaware law, the Company indemnifies its officers, directors, and employees for certain events or occurrences that happen by reason of the relationship with, or position held at, the Company.

The Company has standard indemnification arrangements under office leases (as described in Note 15) that require it to indemnify the landlord against all costs, expenses, fines, suits, claims, demands, liabilities, and actions directly resulting from any breach, violation, or nonperformance of any covenant or condition of the Company's lease. Through December 31, 2013, the Company had not experienced any losses related to these indemnification obligations and no claims were outstanding. The Company does not expect significant claims related to these indemnification obligations, and consequently, concluded that the fair value of these obligations is negligible, and no related reserves were established.

Stock-based Compensation—The Company accounts for all stock options granted to employees and non-employees using a fair value method. Stock-based compensation is measured at the grant date fair value of employee stock option grants and is recognized over the requisite service period of the awards (usually the vesting period) on a straight-line basis, net of estimated forfeitures. The Company accounts for stock option awards to non-employees using the fair value approach. Stock option awards to non-employees are subject to periodic revaluation over their vesting terms.

Convertible Preferred Stock—The Company has classified certain series of convertible preferred stock as temporary equity in the consolidated balance sheets due to certain change in control events that are outside of the Company's control, including liquidation, sale, or transfer of control of the Company, as holders of the convertible preferred stock could cause redemption of the shares in these situations. The carrying value of the convertible preferred stock is being

increased to its maximum redemption value. As of December 31, 2013, the Series A has no liquidation preference and is presented in permanent equity.

Derivative Instruments—The Company has recorded the potential payments that would be made to convertible note holders in the event of a sale of the Company prior to the principal payment due date as a derivative financial liability. Derivative financial liabilities are initially recorded at fair value, with gains and losses arising from changes in fair value recognized in other income (expense) in the consolidated statements of operations and comprehensive loss at each period end while such instruments are outstanding. The embedded derivative liability is being valued using a probability-weighted expected return model. If the Company should repay the note holders or should the note holders convert the debt into equity during the next round of financing without triggering the potential payments due upon a sale of the Company, the derivative financial liability would be de-recognized on that date.

The Company has also recorded common and convertible preferred stock warrants issued to investors and note holders and common stock warrants issued with license agreements as derivative financial liabilities as the terms of the warrants are not fixed due to potential adjustments in the exercise price and/or the number of shares issuable under the warrants. Both the common and convertible preferred stock warrants are initially recorded at fair value, with gains and losses arising from changes in fair value recognized in other income (expense) in the consolidated statements of operations and comprehensive loss at each period end while such instruments are outstanding. The warrant liabilities were valued using a Black-Scholes option-pricing model.

The Company has determined that the Company's obligation to issue and the investors' obligation to purchase additional shares of the Company's Series B-1 represents a freestanding instrument. The freestanding tranche liability was initially recorded at fair value, with gains and losses arising from changes in fair value recognized in other income (expense) in the consolidated statements of operations and comprehensive loss at each period end while such instruments are outstanding. The freestanding tranches were valued using a Black-Scholes option-pricing model. At December 31, 2013, these instruments had been extinguished or settled and are no longer carried on the balance sheet.

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

December 31, 2013

2. Net Loss per Share Attributable to Common Stockholders

The following table summarizes the computation of basic and diluted net loss per share attributable to common stockholders of the Company (in thousands, except per share data):

	Years Ended December 31,	
	2012	2013
Net loss	$ (9,965)	$ (14,171)
Conversion of Series A into Series A-1 and cancellation of warrants pursuant to the recapitalization	—	4,433
Conversion of convertible notes and accrued interest and cancellation of warrants into Series B-1 and forced conversion into Series B pursuant to the recapitalization	—	4,425
Accretion of convertible preferred stock dividends	—	(3,959)
Extinguishment and modification of convertible preferred stock	—	(32,520)
Modification of tranche obligation	—	(787)
Accretion of convertible preferred stock to redemption value	—	(17,875)
Net loss attributable to common stockholders—basic and diluted	$ (9,965)	$ (60,454)
Net loss per share—basic and diluted	$ (197.73)	$ (1,139.14)
Weighted-average common shares used to compute net loss per share—basic and diluted	50,397	53,070

Basic net loss attributable to common stockholders per share is computed by dividing the net loss attributable to common stockholders by the weighted-average number of common shares outstanding for the period. Because the Company has reported a net loss for the years ended December 31, 2012 and 2013, diluted net loss per common share is the same as basic net loss per common share for those periods.

The following potentially dilutive securities have been excluded from the computation of diluted weighted-average shares outstanding because such securities have an antidilutive impact due to losses reported (in common stock equivalent shares):

	As of December 31,	
	2012	2013
Convertible preferred stock	437,773	7,807,593
Options to purchase common stock	79,225	781,663
Common stock warrants	163,070	154,248
Preferred stock warrants	40,203	—
Convertible notes payable and related accrued interest	166,441	—

The unaudited pro forma basic and diluted loss per share attributable to common stockholders for the years ended December 31, 2012 and 2013 has been computed using the weighted-average number of shares of common stock outstanding after giving pro forma effect to (i) the automatic conversion of all shares of convertible preferred stock into shares of common stock, (ii) the conversion of all warrants to purchase shares of convertible preferred

stock into warrants to purchase common stock, and (iii) the conversion of convertible notes and accrued interest into shares of convertible preferred stock and then converted into shares of common stock, as if such conversions had occurred at the beginning of the period presented, or the date of original issuance, if later.

Upon conversion of the convertible preferred stock into common stock in the event of an IPO, the holders of the convertible preferred stock are not entitled to receive undeclared dividends. Accordingly, the impact of the accretion of accrued but unpaid dividends has been excluded from the determination of net loss attributable to common stockholders as the holders of the convertible preferred stock are not entitled to receive accrued but unpaid dividends upon such conversion. The impact of recording beneficial conversion features, the accretion to redemption value, and the modification and extinguishment of convertible preferred stock during the year ended December 31, 2013 has also been excluded from the determination of net loss applicable to common stockholders, assuming the conversion occurred at the beginning of the period presented.

The gains and losses associated with the convertible debt, including interest expense and changes in the fair value of embedded derivative and warrants, have been excluded from the determination of net loss attributable to common stockholders as these expenses and re-measurements would not have occurred if the notes converted at the beginning of the period presented. Unaudited pro forma basic and diluted loss per share attributable to common stockholders are computed as follows (in thousands, except share and per share data):

	Year Ended December 31, 2013 (unaudited)
Pro forma Net Loss per Share—Basic and Diluted	
Numerator:	
Net loss attributable to common stockholders—basic and diluted	$ (60,454)
Conversion of Series A into Series A-1 and cancellation of warrants pursuant to the recapitalization	(4,433)
Conversion of convertible notes and accrued interest and cancellation of warrants into Series B-1 and forced conversion into Series B pursuant to the recapitalization	(4,425)
Accretion of convertible preferred stock dividends	3,959
Extinguishment and modification of convertible preferred stock	32,520
Modification of tranche obligation	787
Accretion of convertible preferred stock to redemption value	17,875
Change in fair value of convertible preferred stock warrant liability	(128)
Interest expense related to convertible notes	335
Change in fair value of common stock warrant liability	1,943
Change in fair value of convertible preferred stock tranche liability	3,144
Net loss attributable to common stockholders—basic and diluted	$ (8,877)

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
December 31, 2013

	Year Ended December 31, 2013 (unaudited)
Denominator:	
Weighted-average number of shares outstanding—basic and diluted	53,070
Adjustment for assumed effect of conversion of convertible notes into common stock	313,450
Adjustment for assumed effect of conversion of convertible preferred stock	5,347,609
Pro forma weighted-average number of common shares used to compute pro forma net loss per share—basic and diluted	5,714,129
Pro forma net loss per share—basic and diluted	$ (1.55)

3. License Agreements

Bayer Pharma AG (formerly known as Bayer Schering Pharma AG)—In March 2007, the Company entered into a license agreement (the "Bayer Agreement") with Bayer Schering Pharma AG ("Bayer") for a worldwide, exclusive license to develop and commercialize entinostat and any other products containing the same active ingredient. Under the terms of the Bayer Agreement, the Company paid a nonrefundable up-front license fee of $2.0 million and is responsible for the development and marketing of entinostat. The Company recorded the $2.0 million license fee as research and development expense during the year ended December 31, 2007, as it had no alternative future use. The Company will pay Bayer royalties on a sliding scale based on net sales, if any, and make future milestone payments to Bayer of up to $150.0 million in the event that certain specified development and regulatory goals and sales levels are achieved. As of December 31, 2013, none of these goals had been achieved, and no milestones were payable.

In connection with the Bayer Agreement, the Company issued to Bayer a warrant to purchase the number of shares of the Company's common stock equal to 1.75% of the shares of common stock outstanding on a fully diluted basis as of the earlier of the date the warrant is exercised or the closing of the Company's IPO. The warrant contains anti-dilution protection to maintain Bayer's potential ownership at 1.75% of the shares of common stock outstanding on a fully diluted basis, which requires that the actual number of shares of common stock issuable pursuant to the warrant be increased or decreased for any changes in the fully diluted shares of common stock outstanding. The warrant is exercisable at an exercise price of $1.23 per share and expires upon the earlier of the 10-year anniversary of the closing of the Company's IPO and the date of the consummation of a disposition transaction.

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The warrant is classified as a liability and recorded at fair value with the changes in the fair value recorded in other income (expense). The Company uses the Black-Scholes option-pricing model to determine the fair value of the warrant. The total shares exercisable under the warrant, the fair value associated with the warrant and the Black-Scholes option-pricing model assumptions used to value the shares of common stock issuable pursuant to the warrant as of December 31, 2012 and 2013 are as follows:

As of December 31,	Total Shares of Common Stock Issuable Under the Warrant	Average Exercise Price	Fair Value of Common Stock	Estimated Volatility	Risk-Free Interest Rate	Estimated Dividend Yield	Estimated Remaining Contractual Life (in years)
2012	16,572	$ 1.23	$ 34.44	70%	0.52%	0.0%	4.25
2013	154,248	$ 1.23	$ 16.85	67%	2.65%	0.0%	9.23

The Company had previously classified the warrant as an equity instrument and had recorded the fair value of the incremental shares earned under the warrant agreement as research and development expense. The Company subsequently determined that the warrant should be classified as a liability due to the variable number of shares potentially exercisable under the warrant. The Company has corrected this error in its consolidated financial statements as of December 31, 2012, which resulted in an increase in the common stock warrant liability of $0.6 million, an increase in deficit accumulated during the development stage of $0.2 million, a decrease in additional paid-in capital of $0.3 million on the consolidated balance sheet, and an increase in net loss and comprehensive loss of $44,000.

The Salk Institute for Biological Studies—In April 2006, the Company entered into a license agreement (the “Salk Agreement”) with the Salk Institute for Biological Studies (“Salk”) for a worldwide, exclusive license to certain patents owned by Salk. Under the terms of the Salk Agreement, the Company paid an up-front license fee of $0.1 million and agreed to issue Salk 6,132 shares of the Company’s common stock after the Company raised its initial preferred stock financing. In March 2007, the Company issued 6,132 shares of its common stock to Salk. The shares had a fair value of $0.1 million as of the date of issuance. In connection with the license fee and common stock issuance, the Company recorded $0.1 million as research and development expense in 2007. Under the Salk Agreement, the Company was obligated to pay Salk royalties on net sales, if any, as well as an annual maintenance fee of $35,000 and milestone payments related to the achievement of certain clinical and regulatory goals. As of December 31, 2012, none of these goals had been achieved, and no milestones were payable. In March 2013, the Company terminated the Salk Agreement.

University of Colorado—In July 2007, the Company entered into an exclusive option agreement (the “Option Agreement”) with the Regents of the University of Colorado (“Colorado”), whereby the Company was granted the exclusive 12-month option to license at a future date certain patents owned by Colorado. Under the terms of the Option Agreement, the Company agreed to reimburse Colorado for fees and costs incurred to date and ongoing patent prosecution costs. From September 2008 to December 2010, the Company paid Colorado a total of $0.1 million to extend the option period through December 31, 2010 for certain of the patents, and paid patent prosecution costs on those patents. In April 2013, the Company entered into an exclusive license agreement (the “Colorado Agreement”) with Colorado for certain of the

patents owned by Colorado. Under the terms of the Colorado Agreement, the Company will pay Colorado a license fee of $0.2 million, with $0.1 million payable within 30 days of execution of the Colorado Agreement and the balance upon the close of a financing with proceeds specifically earmarked in writing for the development of a lung cancer indication involving the licensed patents. In each case, the license fee is payable in cash or the equivalent value of shares of the Company's common stock. Upon the execution of the Colorado Agreement in April 2013, the Company recorded a liability of $0.1 million in research and development expense. In November 2013, the Company issued 20,325 shares of its common stock to University License Equity Holdings, Inc. ("ULEH"), an affiliate of Colorado, to extinguish the liability and recorded additional research and development expense of $0.3 million to reflect the fair value of shares granted to ULEH. Under the Colorado Agreement, the Company is obligated to pay Colorado royalties on net sales, if any, and milestone payments related to the achievement of certain clinical and regulatory goals. As of December 31, 2013, none of these goals had been achieved, and no milestones were payable.

4. Property and Equipment, net

Property and equipment, net, consisted of the following (in thousands):

	December 31,	
	2012	2013
Office and computer equipment	$ 144	$ 131
Furniture and fixtures	94	66
Office equipment under capital lease	11	13
Leasehold improvements	9	—
Total property and equipment	258	210
Less: accumulated depreciation	(238)	(170)
Property and equipment, net	$ 20	$ 40

Depreciation expense was $34,000 and $13,000 for the years ended December 31, 2012 and 2013, respectively. Property and equipment under capital leases consist of office equipment with a cost basis of $11,000 and $13,000 and accumulated amortization of $10,000 and $0, as of December 31, 2012 and 2013, respectively.

5. Fair Value Measurements

The carrying amounts of cash and cash equivalents, restricted cash, accounts payable, and accrued expenses approximated their estimated fair values due to the short-term nature of these financial instruments.

Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value are performed in a manner to maximize the use of observable inputs and minimize the use of unobservable inputs. The accounting standard

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describes a fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last unobservable, that may be used to measure fair value, which are the following:

Level 1—Quoted prices in active markets that are accessible at the market date for identical unrestricted assets or liabilities.

Level 2—Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs for which all significant inputs are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3—Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

During the periods presented, the Company has not changed the manner in which it values assets and liabilities that are measured at fair value using Level 3 inputs. The Company recognizes transfers between levels of the fair value hierarchy as of the end of the reporting period. There were no transfers within the hierarchy during the years ended December 31, 2012 and 2013. A summary of the assets and liabilities carried at fair value in accordance with the hierarchy defined above is as follows (in thousands):

		Fair Value Measurements Using		
	Total Carrying Value	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
December 31, 2012				
Assets:				
Cash equivalents	$ 215	$ 215	$ —	$ —
Liabilities:				
Preferred stock warrant liability	1,814	—	—	1,814
Common stock warrant liability	3,880	—	—	3,880
Embedded derivative liability	287	—	—	287
Total liabilities	$ 5,981	$ —	$ —	$ 5,981
December 31, 2013				
Assets:				
Cash equivalents	$10,093	$4,538	$ 5,555	$ —
Short-term investments	4,022	—	4,022	—
	$14,115	$4,538	$ 9,577	$ —
Liability:				
Common stock warrant liability	$ 2,482	$ —	$ —	$ 2,482

Cash equivalents of $0.2 million as of December 31, 2012 and $4.5 million as of December 31, 2013 consisted of money market funds and are classified within Level 1 of the fair

value hierarchy because they are valued using quoted market prices in active markets. Cash equivalents of $5.6 million as of December 31, 2013 consisted of highly rated corporate bonds and are classified within Level 2 of the fair value hierarchy because pricing inputs are other than quoted prices in active markets, which are either directly or indirectly observable as of the reporting date, and fair value is determined through the use of models or other valuation methodologies.

Short-term investments of $4.0 million as of December 31, 2013 consisted of commercial paper and highly rated corporate bonds and are classified within Level 2 of the fair value hierarchy because pricing inputs are other than quoted prices in active markets, which are either directly or indirectly observable as of the reporting date, and fair value is determined through the use of models or other valuation methodologies.

The short-term investments are classified as available-for-sale securities. As of December 31, 2013, the remaining contractual maturities of the available-for-sale securities were less than one year. There have been no significant realized or unrealized gains or losses on available-for-sale securities for the periods presented.

The convertible preferred stock warrant liability and common stock warrant liability were recorded at fair value determined by using the Black-Scholes option-pricing model. This method of valuation involves using inputs such as the fair value of the Company's convertible preferred and common stock, stock price volatility, contractual term of the warrants, risk-free interest rates, and dividend yields. Due to the nature of these inputs, the valuation of the warrants was considered a Level 3 measurement. See Note 3 for further discussion of the accounting for the Bayer common stock warrant, as well as for a summary of the significant inputs and assumptions used to determine the fair value of the warrant. See Note 12 for further discussion of the accounting for the common and convertible preferred stock warrants issued to investors and note holders, as well as for a summary of the significant inputs and assumptions used to determine the fair value of the warrants. The convertible preferred and common stock warrant liabilities increased or decreased each period based on the fluctuations of the fair value of the underlying security.

The estimated fair value of the embedded derivative was determined using a probability-weighted expected return model. The probability of a change in control occurring was determined to be 5% at December 31, 2012. The future cash flows were discounted to their net present value using a discount rate of 20% at December 31, 2012. The embedded derivative liability will increase or decrease each period based on changes in the probability in the future cash flows. A significant fluctuation in the probability could result in a material increase or decrease in the fair value of the embedded derivative liability.

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A roll-forward of the recurring fair value measurements of the convertible preferred stock warrants liability, common stock warrants liability, embedded derivative liability, and convertible preferred stock tranche liability categorized with Level 3 inputs are as follows (in thousands):

	Convertible Preferred Stock Warrants Liability	Common Stock Warrants Liability	Embedded Derivative Liability	Convertible Preferred Stock Tranche Liability
Balance—December 31, 2011	$ 2,483	$ 2,179	$ 2,919	$ —
Issuance of warrants	—	1,270	—	—
Embedded derivative on debt issuance	—	—	573	—
Change in fair value	(669)	431	(3,205)	—
Balance—December 31, 2012	1,814	3,880	287	—
Tranche liability on stock issuance	—	—	—	5,286
De-recognition of tranche liability on closings				(8,430)
Change in fair value	(128)	1,943	—	3,144
Cancellation of warrants and embedded derivative (Note 9)	(1,686)	(3,341)	(287)	—
Balance—December 31, 2013	$ —	$ 2,482	$ —	$ —

The warrants to purchase common stock and convertible preferred stock issued to investors and note holders were canceled and the embedded derivative was eliminated in March 2013 as a part of the recapitalization described in Note 10.

The following table presents the carrying value and estimated fair value of the Company's debt (in thousands):

	December 31, 2012	
	Carrying Value	Estimated Fair Value
Long-term debt	$ 4,422	$ 4,358
Convertible notes	16,921	16,378
Total	$21,343	$20,736

The fair value of the long-term debt is based on the discounted future cash flows of the long-term debt using a discount rate derived from market interest rates based on the creditworthiness of the Company. The fair value of the convertible notes is based upon the fair value of the underlying equity securities that the notes can be converted into. The valuation of the long-term debt and convertible notes are classified within Level 3 of the hierarchy of fair value measurements.

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6. Accrued Expenses

Accrued expenses consisted of the following (in thousands):

	December 31, 2012	December 31, 2013
Accrued compensation	$ 88	$ 569
Accrued clinical costs	340	169
Interest due to related party	1,709	—
Accrued professional fees	276	485
Other	285	430
Total accrued expenses	$2,698	$1,653

7. Convertible Debt

As of December 31, 2012, the Company had convertible notes outstanding of $16.9 million, which included an aggregate of $16.9 million of principal and $0 of unamortized debt discount. In 2013, the Company issued an additional $0.7 million of convertible notes (“2013 Notes”). Pursuant to the Series B-1 financing and the recapitalization described in Note 10, all outstanding convertible notes were converted to shares of various classes of convertible preferred stock, and as of December 31, 2013, no convertible notes were outstanding. As of December 31, 2012, convertible notes outstanding consisted of the following (in thousands):

2010 convertible note series (“2010 Notes”)	$ 6,000
2011 convertible note series (“2011 Notes”)	8,711
2012 convertible note series (“2012 Notes”)	2,210
	$16,921

Interest accrued on the 2010 Notes, 2011 Notes, 2012 Notes and 2013 Notes (collectively, “the Notes”) at 8%. The 2010 Notes originally matured on June 30, 2011, which maturity was subsequently amended from time to time to December 31, 2012. The 2011 Notes were issued in installments and originally matured on September 30, 2012, which maturity was also subsequently amended to December 31, 2012. As of December 31, 2012, the 2010 Notes and 2011 Notes were due on demand of the majority of note holders. The 2012 Notes originally were scheduled to mature on various dates from October 2013 to January 2014 and the 2013 Notes were scheduled to mature in February 2014. The Notes were unsecured.

The 2010 Notes were issued together with warrants to purchase common stock at an exercise price of $17.22 per share for the number of shares of common stock determined based on the lower of the price per share paid in the next round of qualifying financing or $111.93. The estimated fair value of these warrants was determined to be an aggregate of $584,000 at issuance and was recorded as a discount on the 2010 Notes and was amortized to interest expense using the effective interest method through the original maturity date of June 30, 2011. The fair value was estimated using the Black-Scholes option-pricing model with a volatility of 64%, an estimated life (equivalent to the term) of seven years, a risk-free interest rate of 2.3%,

and no dividends to be paid. Because of the variable number of shares, these warrants were considered to be a derivative and required re-measurement each period with changes recorded in other income (expense).

The 2011 Notes were also issued together with warrants to purchase common stock at an exercise price of $30.75 per share for the number of shares of common stock determined based on the lower of the price per share paid in the next round of qualifying financing or $111.93. The estimated fair value of these warrants was determined to be an aggregate of $1.8 million at issuance and was recorded as a discount on the 2011 Notes, and was amortized to interest expense using the effective interest method through the original maturity dates in 2012. The fair value was estimated using the Black-Scholes option-pricing model with a volatility of 64%, an estimated life (equivalent to the term) of seven years, risk-free interest rates ranging from 1.1% to 1.6%, and no dividends to be paid. Because of the variable number of shares, these warrants were considered to be a derivative and required re-measurement each period end with changes in fair value recorded in other income (expense). The above-mentioned warrants were canceled as part of the Series B financing and the recapitalization as described in Note 10.

The 2010 Notes and the 2011 Notes contained certain features which required separate recognition. These features consisted of an embedded put option and a beneficial conversion feature.

Put Option

In the event of a sale of the Company or a qualified financing, all amounts outstanding under the 2010 Notes and 2011 Notes would have been canceled and the holders would have received, in cash, an amount equal to two times the principal amount of the notes plus interest in the case of the 2010 Notes, or an amount equal to the principal amount of the notes plus interest in the case of the 2011 Notes.

The put option in both cases was not considered to be clearly and closely related to the underlying host instrument, and as a result, separate recognition as a derivative liability was required. The estimated fair value of this feature at the dates of issuance was determined to be $1.0 million in the case of the 2010 Notes and $0.8 million in the case of the 2011 Notes, and was recorded as a discount to the notes. The fair values were estimated using probability weighted models, which assumed a 20% probability of a change in control on the date of issuance for the 2010 Notes and 50% probability for the 2011 Notes. This discount was amortized to interest expense through the original stated maturity date of the notes. The embedded derivative was re-measured each period end with changes in fair value recorded in other income (expense). The embedded derivative was terminated upon conversion of the 2010 Notes and 2011 Notes in the Series B-1 financing and the recapitalization as described in Note 10.

Contingent Conversion

Effective upon closing a qualified financing, all of the outstanding principal and interest on the 2010 Notes and 2011 Notes would have automatically converted into shares of the same class and series of capital stock that the Company issued to investors in the qualified financing

based upon the same price paid by those investors. In addition, at any time prior to the closing of a qualified financing upon election of the majority stockholders, the 2010 Notes and 2011 Notes could have been converted into shares of Series A at a price of $111.93 per share.

For certain of the 2011 Notes issued in December 2011 with an original principal amount of $2.9 million, the impact of allocating the fair value to the detachable warrants resulted in a beneficial conversion feature associated with such notes on the date of issuance. The Company recorded the beneficial conversion feature discount in the aggregate amount of $0.4 million on the issuance date of such notes. This discount was amortized to interest expense through the original stated maturity date of such notes.

The 2012 Notes were convertible into shares of convertible preferred stock issuable in the next qualified financing at a price per share equal to 80% of the price paid by investors in such financing. In the event of a liquidation transaction or an underwritten public offering, the holders could convert the principal and accrued interest into shares of Series A at a price per share of $111.93.

The 2013 Notes contained terms similar to those in the 2012 Notes.

8. Long-term Debt

Term Loan—In March 2011, the Company entered into a $6.0 million senior secured term loan facility with General Electric Capital Corporation (“GE”). The loan was secured by all tangible property and intellectual property of the Company. An initial amount of $3.0 million was borrowed by the Company on March 29, 2011, and an additional amount of $3.0 million was borrowed by the Company on September 29, 2011. The initial term loan had a duration of 42 months, and the second term loan had a term of 36 months. Both loans were due on September 29, 2014. Interest accrued based on the three-year treasury rate in effect three business days prior to the funding date of each applicable term loan, plus 8.75% per annum, which was 10.01% for the tranche borrowed on March 29, 2011 and 9.75% for the tranche borrowed on September 29, 2011. A nonrefundable closing fee of $180,000 was due at maturity and was recorded in the notes payable balance as of December 31, 2012.

In March and May 2013, the Company entered into an agreement with GE to modify the existing loan agreement to allow for interest-only payments for the period March 1 through May 31, 2013. In June 2013, the agreement was further amended to extend the interest-only period through July 15, 2013 in exchange for a commitment by the Company to accelerate the repayment of the loan. Under the terms of the commitment, the Company paid $2.0 million of the outstanding loan balance in July 2013 in connection with the third tranche of the Series B-1 financing along with principal payments of $0.9 million through September 30, 2013, leaving $1.5 million outstanding, which the Company paid off on November 21, 2013, in connection with a fourth tranche closing of the Series B-1 financing. The outstanding debt of $4.4 million as of December 31, 2012 has been classified as current in the consolidated balance sheets.

As part of the loan facility, the Company agreed to provide GE the opportunity to invest up to $1.0 million in the Company’s next convertible preferred stock or convertible bridge financing, or other issuance of equity interest, subject to certain conditions and exclusions. During December

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2011, GE participated in the December 2011 Notes offering and purchased $0.3 million of convertible notes, and in April 2012 purchased an additional $0.3 million of notes, and in June 2012 purchased an additional $33,000 of notes. As part of the recapitalization described in Note 10, in March 2013, the entire $0.8 million in principal and accrued interest converted into shares of Series B-1. As a result of this extinguishment, for the year ended December 31, 2013, the Company recorded a gain on extinguishment of $0.1 million in other income (expense), net.

9. Convertible Preferred Stock

As of December 31, 2012, the Company had authorized and designated three series of convertible preferred stock: Series A, Series A-1 and Series B. There were 634,146 shares designated as Series A; 634,146 shares designated as Series A-1; and 28,455 shares designated as Series B. No shares of Series A-1, or Series B were issued as of December 31, 2012. Holders of shares of Series A and Series A-1 had substantially the same rights and privileges except that holders of shares of Series A-1 were not entitled to designate any members of the Board.

As of December 31, 2013, the Company has authorized and designated four series of convertible preferred stock: Series A, Series A-1, Series B, and Series B-1. There are 4,390,243 shares designated as Series A; 3,951,219 shares designated as Series A-1; 4,227,642 shares designated as Series B; and 4,146,341 shares designated as Series B-1. Shares of Series A and Series B would only be issued in the event a holder of Series A-1 or Series B-1 did not participate in a tranche of and purchase their pro rata share in the Series B-1 financing as discussed in "*Conversion*" below.

In March 2013, the Company effected a recapitalization, further described in Note 10, which has resulted in significant changes in the various classes of convertible preferred stock. As part of the recapitalization, shares of the then-outstanding Series A were subject to a 10-for-1 stock split, with the related conversion price and value reduced accordingly. Convertible preferred stock consisted of the following (in thousands, except share data):

December 31, 2012	Preferred Shares Authorized	Issuance Date	Preferred Shares Issued and Outstanding	Liquidation Preference	Carrying Value
Series A	634,146	March 2007 August and October 2008 January 2010	437,773	$ 49,000	$ 49,000

December 31, 2013	Preferred Shares Designated	Issuance Date	Preferred Shares Issued and Outstanding	Liquidation Preference	Carrying Value
Series A-1	3,951,219	March 2013	3,502,185	$ 41,760	$ 59,394
Series B	4,227,642	March and August 2013	340,302	$ 2,933	$ 5,084
Series B-1	4,146,341	March, April, July, August and November 2013	3,789,999	$ 75,846	$ 75,846
Totals					$ 140,324
Series A	4,390,243	March and August 2013	875,545	$ —	$ 7,231

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In March 2007, the Company issued 178,683 shares of Series A at an issuance price of $111.93 per share, for gross proceeds of $20.0 million, including the conversion of $3.5 million of notes payable, and incurred issuance costs of $0.1 million. In August 2008 and October 2008, the Company issued an additional 178,683 shares of Series A at an issuance price of $111.93 per share, for gross proceeds of $20.0 million, and incurred issuance costs of $39,000.

In January 2010, the Company issued an additional 80,407 shares of Series A at an issuance price of $111.93 per share, for gross proceeds of $9.0 million, and incurred issuance costs of $0.1 million. Included in the sale were warrants to purchase an additional 40,203 shares of Series A at $111.93 per share. The warrants are exercisable over a seven-year period from the date of issuance. The warrants have an exercise price of $111.93 per share, and expire on January 22, 2017. The Company recorded the fair value of the Series A warrants of $2.1 million on issuance as a liability. The fair value of the warrant at the issuance date was determined using the Black-Scholes option-pricing model with the following assumptions: volatility of 66%, term of 7 years, risk-free interest rate of 3.1%, and a dividend yield of 0%. The Series A warrant liability was recorded at fair value with changes in fair value recognized in other income (expense). These warrants were canceled as part of the Series B-1 financing and the recapitalization.

As of December 31, 2012, holders of shares of convertible preferred stock had the following rights, preferences and privileges:

Voting—Holders of shares of convertible preferred stock had full voting rights and powers equal to the rights and powers of holders of shares of common stock, with respect to any matters upon which holders of shares of common stock have the right to vote. Holders of shares of convertible preferred stock were entitled to the number of votes equal to the largest number of shares of common stock into which such share of convertible preferred stock could be converted at the record date for determination of the stockholders entitled to vote on such matters. Holders of shares of Series A, voting as a separate class on an as-converted basis, were entitled to elect three members of the Board. Holders of shares of common stock, voting as a separate class, were entitled to elect two members of the Board. Holders of a majority of the outstanding shares of common stock and a majority of the outstanding shares of Series A and Series A-1, each voting as a separate class on an as-converted basis, were entitled to elect one member of the Board. Holders of at least 60% of the outstanding shares of Series A and Series A-1 and a majority of the outstanding shares of common stock, each voting as a separate class on an as-converted basis, were entitled to elect any remaining directors.

Conversion—Each share of convertible preferred stock was convertible at the option of the holder into one share of common stock, subject to certain adjustments for dilution, if any, resulting from future stock issuances. Each share of convertible preferred stock would have automatically converted into common stock at its then effective conversion rate upon the earlier of (i) an underwritten public offering of the Company's common stock in which aggregate proceeds were in excess of $50.0 million at a price of at least $2.73 per share or (ii) the election of holders of at least 60% of the outstanding shares of Series A and Series A-1, voting together as a single class on an as-converted basis.

In the event that any holder of shares of Series A did not participate in a future equity closing by exercising such holder's right of first offer pursuant to the investors' rights

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agreement dated March 30, 2007, as amended, each share of Series A then owned by such holder would automatically convert into an equivalent number of shares of Series A-1.

Dividends—Holders of shares of Series A and Series A-1, in preference to the holders of shares of common stock, were entitled to receive, when and if declared by the Board, noncumulative dividends at the rate of 8% of the applicable original issue price per share per annum. No dividends have been declared to date.

In addition, the holders of Series A are entitled to receive a dividend equal to any dividend paid on common stock, when and if declared by the Board, on the basis of the number of common shares into which a share of Series A may be convertible.

Liquidation—In the event of any liquidation, dissolution, winding-up, sale, or merger of the Company, whether voluntarily or involuntarily, each holder of shares of convertible preferred stock was entitled to receive, in preference to the holders of common stock, a per share amount equal to the original issue price of $111.93 plus all declared but unpaid dividends.

Amended and Restated Certificate of Incorporation

Pursuant to the amended and restated certificate of incorporation in March 2013, the Company authorized and designated a new series of Series B-1. Prior to December 31, 2012, there were only shares of Series A outstanding. In March 2013, the Company converted all outstanding Series A shares into Series A-1 shares, unless an existing stockholder did not participate in a future financing for their pro rata share of that financing, in which case their existing Series A-1 would be forced to convert into Series A. As a result of the changes to the rights and preferences of the issued and outstanding Series A, the Company determined an extinguishment of the Series A had occurred. For more discussion of the accounting regarding the extinguishment, see Note 10.

In March 2013, the Company entered into a Series B-1 purchase agreement with certain of the Company's then existing equity and debt holders, pursuant to which the Company agreed to sell up to 2,763,239 shares of a newly created series of convertible preferred stock designated as Series B-1 at a purchase price of $11.19 per share to these existing investors in four tranches. For more discussion on the Series B-1 financing, see Note 10.

In November 2013, the Company filed an updated certificate of incorporation. Effective upon the filing of the Eighth Amended and Restated Certificate of Incorporation, the Company's authorized shares consisted of the following:

Class	Number of Shares
Series A	4,390,243
Series A-1	3,951,219
Series B	4,227,642
Series B-1	4,146,341
Common stock	9,837,398

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As of December 31, 2013, the various series of convertible preferred stock have the following rights, preferences, and privileges):

Voting—Holders of shares of convertible preferred stock have full voting rights and powers equal to the rights and powers of holders of shares of common stock, with respect to any matters upon which holders of shares of common stock have the right to vote. Holders of shares of convertible preferred stock are entitled to the number of votes equal to the largest number of shares of common stock into which such share of convertible preferred stock could be converted at the record date for determination of the stockholders entitled to vote on such matters. Holders of shares of Series A-1 and Series B-1, voting together as a separate class on an as-converted basis, are entitled to elect four members of the Board. Holders of shares of common stock, voting as a separate class, are entitled to elect two members of the Board. Holders of a majority of the outstanding shares of common stock and a majority of the outstanding shares of convertible preferred stock, each voting as a separate class on an as-converted basis, are entitled to elect one member of the Board. Holders of at least 60% of the outstanding shares of convertible preferred stock and a majority of the outstanding shares of common stock, each voting as a separate class on an as-converted basis, are entitled to elect any remaining directors.

Conversion—Each share of Series B-1, A-1, and B is convertible at the option of the holder into one share of common stock, subject to certain adjustments for dilution, if any, resulting from future stock issuances. Each share of Series A is convertible at the option of the holder into one-fifth of a share of common stock, subject to certain adjustments for dilution, if any, resulting from future stock issuances. The outstanding shares of convertible preferred stock automatically convert into common stock at the then effective conversion rate upon the earlier of (i) an underwritten public offering of our common stock in which aggregate proceeds are in excess of $50.0 million at a price of at least $5.00 per share, as adjusted for any recapitalization event or (ii) the election of holders of at least 60% of the outstanding shares of convertible preferred stock, voting as a separate class on an as-converted basis.

In the event that any holder of Series A-1 or Series B-1 does not participate in a future tranche of the Series B-1 financing, by purchasing such holder’s pro rata share, each share of Series A-1 or Series B-1 then owned by such holder shall automatically convert into an equivalent number of Series A or Series B shares upon consummation of such financing.

Dividends—Holders of shares of Series B-1, in preference to holders of shares of Series A-1, Series A, Series B, and common stock, are entitled to receive, whether or not declared by the Board, cumulative dividends at the rate of 8% of the applicable original issue price per share per annum. Such dividends accrue and are cumulative from the date of the issuance of the Series B-1. No such dividends have been declared to date.

Holders of shares of Series A-1, in preference to holders of shares of Series A, Series B and common stock, are entitled to receive, whether or not declared by the Board, cumulative dividends at the rate of 8% of the applicable original issue price per share per annum. Such dividends accrue and are cumulative from the date of the issuance of the Series A-1. No such dividends have been declared to date. As of December 31, 2013, the Company has recorded cumulative dividends on Series A-1 and Series B-1 of $2.4 million and $1.6 million, respectively.

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In addition, holders of shares of Series A-1 and Series B-1 are entitled to receive, on an as-converted basis, dividends declared and paid to holders of shares of common stock.

Liquidation—In the event of any liquidation, dissolution, winding-up, sale or merger of the Company, whether voluntarily or involuntarily, each holder of shares of Series B-1 is entitled to receive, in preference to holders of shares of Series A-1, Series A, Series B, and common stock, a per share amount equal to the original issue price times a factor of 1.75, plus all accrued but unpaid dividends. Each holder of shares of Series A-1 is entitled to receive, in preference to holders of shares of Series A, Series B, and common stock, a per share amount equal to the original issue price, plus all accrued but unpaid dividends. Each holder of shares of Series B is entitled to receive, in preference to holders of shares of Series A and common stock, a per share amount equal to the original issue price multiplied by 75%, plus all accrued but unpaid dividends. After the above payments have been made for the full amounts to which they are entitled, any remaining assets will be distributed pro rata among holders of shares of common stock, Series A-1, Series B-1, and Series A, on an as-converted basis. The Series A has no liquidation preferences.

10. Recapitalization and Series B-1 Preferred Stock Financing

In March 2013, in connection with the Company's Series B-1 financing, the then outstanding shares of Series A and convertible notes were subject to an overall recapitalization of the Company's capital structure.

The impact of the recapitalization on the various securities outstanding depended upon whether the holder of an affected security participated in the Series B-1 financing by purchasing Series B-1 shares for cash on at least a pro rata basis, as described in the agreements underlying the Series B-1 financing. Generally, to the extent that the holder met the participation requirement, such holder received more senior securities in exchange for their existing securities.

As part of the recapitalization, shares of the then outstanding Series A were subject to a 10-for-1 stock split with the related conversion price and value reduced accordingly. These Series A shares were then exchanged for a new series of stock, Series A-1, with the rights and preferences described in Note 9. To the extent that the holders met the participation requirements of the recapitalization and purchased their share of the Series B-1 financing, such Series A-1 shares were unaffected; to the extent they did not participate, the Series A-1 shares were automatically forced to convert at a rate of 1-to-1 into a less senior class of convertible preferred stock, labeled Series A. As a result, 437,773 shares of Series A-1 with a carrying value of $4.9 million were converted to 437,773 shares of Series A with a fair value of $2.1 million.

In addition, to the extent that holders of the convertible notes participated in their pro rata share of the cash issuance of Series B-1, the principal and accrued interest on those securities were converted into shares of Series B-1, at a price per share equal to the price paid by other investors in the financing. To the extent they did not participate in the cash issuance, the principal and accrued interest on those securities were converted into a less senior class of convertible preferred stock, labeled Series B, at a price per share equal to the price paid by other investors in the financing.

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As part of the recapitalization, all outstanding warrants to acquire either convertible preferred stock or common stock held by the investors were canceled, and the embedded derivative described in Note 7 was removed by agreement.

The recapitalization has been accounted for as an extinguishment of the various securities involved as the changes to the terms of the affected securities were significantly modified. The carrying values of the Series A shares, the convertible notes, embedded derivative and related warrants were removed, and the fair value of the new securities (Series B-1, Series A-1, Series B and Series A) issued was recorded. The gain on extinguishment has been recorded as an increase to additional paid-in-capital of $8.9 million for the related party components of the recapitalization, and $0.1 million was recorded as other income (expense) in the consolidated statements of operations and comprehensive loss for the non-related party component.

In accordance with the terms of the Series B-1 purchase agreement, the Company authorized the sale and issuance of up to 2,763,239 shares of Series B-1. The Series B-1 financing was structured to close in four tranches. The Company determined the right of the investors to purchase shares of Series B-1 in future tranches (the second, third and fourth tranches) meets the definition of a freestanding financial instrument and is recognized as a liability at fair value. The Company adjusted the carrying value of the tranche obligations to its estimated fair value at each closing and at the reporting date. Increases or decreases in the fair value of the tranche obligations were recorded as other income (expense), net, in the consolidated statements of operations and comprehensive loss.

The first tranche closed in March 2013 and resulted in the issuance of 118,370 shares of Series B-1 for gross cash proceeds of $1.3 million and the issuance of 1,605,697 shares of Series B-1 and 148,153 shares of Series B with a total fair value of $18.7 million upon conversion of the convertible notes. Upon the first tranche closing, the Company recognized a liability of $0.2 million for the fair value of the future tranche obligations. The fair value of the freestanding instrument tranche obligations was determined using Black-Scholes option-pricing models on the date of the issuance using the following assumptions: fair value of convertible preferred stock of $11.19, expected life of 0.08 to 0.75 years, risk-free interest rate of 0.04 to 0.13%, and expected volatility of 50%.

Following the first tranche of the Series B-1 financing and the recapitalization, the Company had no remaining convertible notes outstanding and the following classes and number of shares of convertible preferred stock were outstanding:

Class	Number of Shares
Series A	437,773
Series A-1	3,939,957
Series B	148,153
Series B-1	1,724,067

In April 2013, the Company entered into a stock purchase agreement and license agreement with a third party to license certain technology from the Company and invest in the Company's Series B-1, as described in Note 15. Under the terms of this agreement, the Company issued

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223,353 shares of Series B-1 for gross proceeds of $2.5 million and provided for a future closing with the third party for 223,353 shares of Series B-1 for $2.5 million which closed in November 2013. Upon the initial closing with the third party, the Company recognized a liability of $0.8 million for the fair value related to the future tranche obligation as a freestanding financial instrument in the Company's consolidated balance sheets. The fair value of the tranche obligation was determined using Black-Scholes option-pricing models using the following assumptions: fair value of convertible preferred stock of $18.45, expected life of 0.51 to 0.67 years, risk-free interest rate of 0.10 to 0.12%, and expected volatility of 55%. Upon the initial closing with the third party, a beneficial conversion feature with an intrinsic value of $0.5 million was recorded as an increase to additional paid-in capital and a reduction of the proceeds allocated to the Series B-1 shares.

Additionally in April 2013, the existing investors executed the second tranche of the Series B-1 financing in which the Company issued 98,268 shares of Series B-1 and received gross proceeds of $1.1 million. As a result of the closing of the second tranche obligation, the liability related to this closing was marked-to-market to its fair value which was determined to be $0.

In July 2013, the Company filed its Seventh Amended and Restated Certificate of Incorporation (the "Seventh Amended Certificate") whereby the rights and preferences of the Series B-1 and Series A-1 were significantly modified. The Company has accounted for the amendment of the Series B-1 and Series A-1 as an extinguishment of the existing securities involved and the issuance of new securities. The carrying value of the Series B-1 and Series A-1 shares and the remaining third and fourth tranche obligations were removed, and the fair value of the new securities issued was recorded. A loss on extinguishment was recorded as an increase in deficit accumulated during the development stage of $25.5 million and a decrease in additional paid-in-capital of $7.0 million.

The Seventh Amended Certificate did not substantively change the rights and preferences of the Series B and Series A. As such, the Company has accounted for the amendment to the Series B and Series A as a modification of these series. The Company determined there was no change in the fair value of the Series B and Series A shares upon the filing of the Seventh Amended Certificate.

In August 2013, the Company and the investors amended the Series B-1 purchase agreement (the "Amendment") to cancel all future purchase obligations (the third and fourth tranches) and provide for revised additional closing obligations (new third, fourth and fifth tranches). As a result of the modification to the tranche obligations, the Company recorded a charge to additional paid-in capital of $0.8 million related to the change in the fair value of the tranche obligation.

Additionally, the Amendment included a new investor pursuant to an agreement to license certain technology and rights to this party in conjunction with the Series B-1 investment. This new investor participated in the August closing and obtained rights to participate in the fourth and fifth tranches, which was recognized as a tranche liability. In connection with the Amendment, the Company executed the third tranche of Series B-1 shares in August 2013 with the existing investors and the new investor in which the Company issued 605,280 shares of

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Series B-1 and received gross proceeds of $6.8 million and incurred $0.4 million of issuance costs. Upon the closing of the third tranche in August 2013 with the new investor, a beneficial conversion feature with an intrinsic value of $0.8 million was recorded as an increase to additional paid-in capital and a reduction of the proceeds allocated to the Series B-1 shares. Upon the closing of the third tranche in August 2013 with the existing investors and the new investor, the Company recognized the impact of the tranche obligations as a net reduction of the proceeds allocated to the Series B-1 shares of $2.0 million.

One of the investors and its affiliate, which had participated in the first and second tranches of the Series B-1 financing, did not participate in the third tranche. As a result, 192,149 shares of Series B-1 shares held by these investors with a carrying value of $3.8 million were converted to 192,149 shares of Series B and the 437,772 shares of Series A-1 shares held by these investors with a carrying value of $5.1 million were converted to 437,772 shares of Series A.

In November 2013, pursuant to an Acknowledgment and Waiver Agreement (the “Waiver Agreement”), the Company and the holders of Series B-1 amended the Series B-1 purchase agreement, dated March 8, 2013, as amended on August 20, 2013. Pursuant to the Waiver Agreement, the holders of Series B-1 agreed to waive certain conditions to their obligation to close the fourth and fifth tranches of the Series B-1 financing and closed both tranches in November 2013. The Company issued 1,107,827 shares of Series B-1 and received gross proceeds of $12.4 million.

In November 2013, pursuant to a letter agreement, the Company and Eddingpharm agreed to accelerate the second tranche under the Eddingpharm Purchase Agreement to November 15, 2013, and the Company issued 223,353 shares of Series B-1 and received gross proceeds of $2.5 million.

Upon the closings of the remaining tranches in November 2013, the Company derecognized the tranche obligation, which resulted in a net increase in the proceeds allocated to the Series B-1 shares of $7.0 million. The fair value of the remaining tranche obligations were re-measured just prior to the closings using the following assumptions: fair value of convertible preferred stock of $20.91; expected life of 0.03 years; risk-free interest rate of 0.01%; and volatility of 50%.

As a result of the changes in the fair value of the tranche obligations, the Company recorded an aggregate of $3.1 million to other income (expense) in the consolidated statements of operations and comprehensive loss during the year ended December 31, 2013.

The Company recorded accretion of $17.9 million to record the convertible preferred stock at its redemption value.

The rights and preferences of the convertible preferred stock are described in more detail in Note 9.

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11. Common Stock

The voting, dividend, and liquidation rights of the holders of shares of common stock are subject to and qualified by the rights, powers, and preferences of the holders of shares of convertible preferred stock. Common stock has the following characteristics:

Voting—The holder of each share of common stock is entitled to one vote per share held. The holders of common stock shall be entitled to elect two members of the Board.

Dividends—Common stockholders are entitled to receive dividends, if and when declared by the Board, subject to the rights of holders of all classes of stock outstanding having priority rights as to dividends.

Liquidation—After payment to the holders of shares of preferred stock of their liquidation preferences, the holders of shares of common stock are entitled to share ratably in the Company's assets available for distribution to stockholders, in the event of any voluntary or involuntary liquidation, dissolution, or winding down of the Company or upon the occurrence of a deemed liquidation event.

Reserved Shares—The Company's reserved shares of common stock for future issuance related to potential warrant exercise, conversion of the convertible preferred stock, and exercise of stock options are as follows:

	As of December 31,	
	2012	2013
Common stock issuable in connection with notes	166,441	—
Common stock issuable under Bayer warrant	16,572	154,248
Series A preferred stock warrants	40,203	—
Common stock warrants	146,498	—
Series A preferred stock	437,773	175,107
Series A-1 preferred stock	—	3,502,185
Series B preferred stock	—	340,302
Series B-1 preferred stock	—	3,789,999
Common stock options	89,212	810,376
Total	896,699	8,772,217

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12. Warrants

Below is a summary of the number of shares issuable upon exercise of outstanding warrants and the terms and accounting treatment for the outstanding warrants:

	Warrants as of December 31, 2012	Fair Value of Warrant Liabilities as of December 31, 2012	Warrants as of December 31, 2013	Fair Value of Warrant Liabilities as of December 31, 2013	Weighted-Average Exercise Price Per Share	Expiration Date	Balance Sheet Classification December 31, 2012	Balance Sheet Classification December 31, 2013
Warrants to purchase Series A Convertible Preferred Stock	40,203	$ 1,814	—	$ —	$ 111.93	January 22, 2017	Liability	N/A(1)
Warrants to purchase common stock:								
Bayer common stock warrant	16,572	551	154,248	2,482	$ 1.23	(2)	Liability	Liability
August 2010 notes payable	63,953	1,540	—	—	$ 17.22	August 3, 2017	Liability	N/A(1)
December 2011 notes payable	27,613	595	—	—	$ 30.75	December 19, 2018	Liability	N/A(1)
April 2012 notes payable	27,037	585	—	—	$ 30.75	April 2, 2019	Liability	N/A(1)
June 2012 notes payable	27,895	609	—	—	$ 30.75	June 26, 2019	Liability	N/A(1)
Total warrants to purchase common stock	163,070	$ 3,880	154,248	$ 2,482				

(1) Warrants to purchase Series A and common stock issued in connection with convertible notes between 2010 and 2012 were canceled in March 2013 in connection with the Series B-1 financing and the recapitalization (Note 10).
(2) Upon earlier of 10 years from IPO or upon substantial disposition.

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The assumptions used to determine the fair value of the Bayer warrant for the years ended December 31, 2012 and 2013 are included in Note 3. The assumptions used to determine the fair value of the other outstanding warrants were as follows:

		Year Ended December 31, 2012				
Warrant Issue Date	Class	Expected Term (in years)	Expected Volatility	Risk-Free Interest Rate	Dividend Yield	Fair Value of Underlying Shares
January 2010	Series A preferred stock	4.1	66%	0.55%	—	$ 97.17
August 2010	Common stock	4.6	70%	0.65%	—	$ 34.44
December 2011	Common stock	6.0	67%	0.95%	—	$ 34.44
April 2012	Common stock	6.3	66%	1.10%	—	$ 34.44
June 2012	Common stock	6.5	66%	1.01%	—	$ 34.44

13. Stock-based Compensation

In January 2007, the Board and the Company's stockholders adopted the 2007 Stock Plan (the "2007 Plan"). Under the 2007 Plan, incentive stock options, non-statutory stock options, and stock purchase rights may be granted to employees, directors, and consultants. The stock options generally vest over a four-year period, but vesting provisions can vary based on the Board's discretion and expire 10 years from the date of grant. The Company has not granted unrestricted stock awards under the 2007 Plan since its inception.

As of December 31, 2012, a total of 92,802 shares of common stock were authorized for issuance. In March 2013, the Board increased the maximum number of shares that can be issued under the 2007 Plan to 695,218. In August 2013, the Board increased the maximum number of shares that can be issued under the 2007 Plan to 813,962. As of December 31, 2013, there were 28,713 shares available for issuance under the 2007 Plan.

The Company recognized stock-based compensation expense related to the issuance of stock option awards to employees and non-employees in the consolidated statements of operations and comprehensive loss as follows (in thousands):

	Years Ended December 31,	
	2012	2013
Research and development	$ 40	$ 326
General and administrative	99	1,089
Total	$ 139	$ 1,415

As of December 31, 2013, there was $2.7 million of unrecognized compensation cost related to employee and non-employee unvested stock options share-based compensation arrangements granted under the 2007 Plan, which is expected to be recognized over a weighted-average remaining service period of 2.75 years. Stock compensation costs have not been capitalized by the Company.

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The fair value of each option award is estimated on the date of grant using the Black-Scholes option-pricing model that uses the assumptions noted in the table below. Expected volatility for the Company's common stock was determined based on an average of the historical volatility of a peer group of similar public companies. The expected term of options granted to employees was calculated using the simplified method, which represents the average of the contractual term of the option and the weighted-average vesting period of the option, as the Company does not have sufficient exercise data. For options granted to employees in 2013, the Company determined the expected term based on an average of expected terms used by a peer group of similar public companies. The contractual life of the option was used for the estimated life of the non-employee grants. The assumed dividend yield is based upon the Company's expectation of not paying dividends in the foreseeable future. The risk-free interest rate for periods within the expected life of the option is based upon the U.S. Treasury yield curve in effect at the time of grant. The accounting guidance for stock-based compensation requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

In determining the exercise prices for options granted, the Board has considered the fair value of the common stock as of each grant date. The fair value of the common stock underlying the stock options has been determined by the Board at each award grant date based upon a variety of factors, including the results obtained from an independent third-party valuation, the Company's financial position and historical financial performance, the status of technological developments within the Company's products, the composition and ability of the current clinical and management team, an evaluation or benchmark of the Company's competition, the current business climate in the marketplace, the illiquid nature of the common stock, arm's-length sales of the Company's capital stock (including convertible preferred stock), the effect of the rights and preferences of the preferred stockholders, and the prospects of a liquidity event, among others.

The grant date fair values of options issued to employees and non-employees were estimated using the Black-Scholes option-pricing model with the following assumptions:

	Years Ended December 31,	
	2012	2013
Expected term (in years)	6.64	6.29
Volatility rate	66.67%	68.42%
Risk-free interest rate	1.45%	1.13%
Expected dividend yield	0.00%	0.00%

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A summary of employee and non-employee option activity under the 2007 Plan is presented below:

	Number of Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (in years)	Aggregate Intrinsic Value (in thousands)
Outstanding—January 1, 2013	79,225	$ 17.46	6.2	
Granted	711,954	$ 5.22		
Exercised	—	$ —		
Canceled or forfeited	(9,516)	$ 30.24		
Outstanding—December 31, 2013	781,663	$ 6.16	9.0	$ 8,446
Vested and exercisable—December 31, 2013	310,576	$ 6.26	8.4	$ 3,363
Options vested and expected to vest—December 31, 2013	758,198	$ 6.16	9.0	$ 8,192

The weighted-average grant date fair value of options granted during the years ended December 31, 2012 and 2013, was $23.37, and $5.90, respectively. The fair value is being expensed over the vesting period of the options (three to four years) on a straight-line basis as the services are being provided. No options were exercised, and no tax benefits were realized from any share-based payment arrangements for the two years ended December 31, 2013.

In May 2013, the Company canceled 8,154 outstanding stock options for eight employees. These options had been granted at exercise prices ranging from $17.22 to $38.13. The cancellation of these awards was accompanied by a concurrent grant of 545,868 replacement stock options issued with an exercise price of $2.46 per share and was accounted for as a modification. The incremental compensation cost was measured as the excess of the fair value of the modified grants determined over the fair value of the original award immediately before modification. The fair value of common stock used to calculate the incremental compensation cost was $6.15 per share. The unrecognized compensation cost related to the canceled awards and the incremental compensation cost arising from this modification totaled $2.8 million. The awards were measured based on the fair value share price and the Black-Scholes option-pricing model assumptions at the modification date. Compensation expense of $0.7 million was recognized immediately for the portion of the expense that related to options that were vested on the grant date. The balance of the unrecognized compensation and incremental compensation of $2.1 million will be recognized over the remaining vesting period for the respective replacement awards.

14. Income Taxes

The Company has not recorded any net tax provision for the periods presented due to the losses incurred and the need for a full valuation allowance on deferred tax assets. The difference between the income tax expense at the U.S. federal statutory rate and the recorded

provision is primarily due to the valuation allowance provided on all deferred tax assets. The Company's loss before income tax for the periods presented was generated entirely in the United States.

The significant components of the Company's deferred tax are as follows (in thousands):

	Years Ended December 31,	
	2012	2013
Deferred tax assets (liabilities):		
Net operating loss carryforwards	$ 7,171	$ 10,326
Research and development credits	955	1,100
Capitalized start-up and research and development costs	24,098	25,242
Depreciation and amortization	(4,076)	(5,477)
Accruals	307	377
Other temporary differences	181	490
Deferred tax assets before valuation allowance	28,636	32,058
Valuation allowances	(28,636)	(32,058)
Net deferred tax assets	$ —	$ —

The Company has provided a valuation allowance for the full amount of the net deferred tax assets as the realization of the deferred tax assets is not determined to be more likely than not. The valuation allowance increased by $3.6 million and $3.5 million in 2012 and 2013, respectively, due to the increase in deferred tax assets, primarily due to net operating loss carryforwards and capitalized research and development costs.

As of December 31, 2013, the Company had approximately $26.8 million and $21.8 million in federal and state net operating losses, respectively, which expire at various dates from 2014 through 2033. As of December 31, 2013, the Company had federal and state research credits of $0.7 million and $0.6 million, respectively, which begin to expire in 2020.

Realization of future tax benefits is dependent on many factors, including the Company's ability to generate taxable income within the net operating loss carryforward period. Under the Internal Revenue Code provisions, certain substantial changes in the Company's ownership, including the sale of the Company or significant changes in ownership due to sales of equity, may have limited, or may limit in the future, the amount of net operating loss carryforwards which could be used annually to offset future taxable income.

As of December 31, 2012 and 2013, the Company had uncertain tax positions of $0.8 million and $0.7 million, respectively, related to capitalized research and development costs and research and development credits, which reduce the deferred tax assets with a corresponding decrease to the valuation allowance. The Company has elected to recognize interest and penalties related to income tax matters as a component of income tax expense, of which no interest or penalties were recorded for the years ended December 31, 2012 and 2013. The

Company expects none of the unrecognized tax benefits to decrease within the next 12 months related to expired statutes or settlement with the taxing authorities. Due to the Company's valuation allowance as of December 31, 2013, none of the Company's unrecognized tax benefits, if recognized, would affect the effective tax rate.

A reconciliation of the Company's unrecognized tax benefits is as follows (in thousands):

	Years ended December 31,	
	2012	2013
Unrecognized tax benefit—beginning of year	$ 867	$ 778
Decreases related to prior period positions	(89)	(98)
Unrecognized tax benefit—end of year	$ 778	$ 680

The Company files tax returns in the United States, Massachusetts, California, and Florida. All tax years since inception (October 11, 2005) remain open to examination by major tax jurisdictions to which the Company is subject, as carryforward attributes generated in years past may still be adjusted upon examination by the Internal Revenue Service or state tax authorities if they have or will be used in a future period. The Company is currently not under examination by the Internal Revenue Service or any other jurisdictions for any tax years.

15. Commitments

License Agreements

NovaMedica—In August 2013, in connection with the third tranche of its Series B-1 financing, the Company entered into a Technology Transfer Agreement (the "Tech Transfer Agreement") with Domain Russia Investments Limited ("DRI"). Pursuant to the Tech Transfer Agreement, in exchange for nominal payment, the Company assigned to DRI certain patent applications and granted to DRI a license to develop and commercialize entinostat in certain Eastern European countries (the "Covered Territory"). The Company concurrently entered into a sublicense agreement with DRI (the "DRI Sublicense") and a sublicense agreement (the "NovaMedica Sublicense") with NovaMedica LLC ("NovaMedica"), which is jointly owned by Rusnano Medinvest LLC and DRI. Pursuant to the DRI Sublicense, the Company granted to DRI an exclusive sublicense to develop, manufacture and commercialize entinostat in the Russian Federation. Pursuant to the NovaMedica Sublicense, the Company granted to NovaMedica an exclusive sublicense to develop, manufacture and commercialize entinostat in the rest of the Covered Territory. Immediately thereafter, the Company, DRI and NovaMedica executed an assignment and assumption agreement, pursuant to which the assigned patents and all of DRI's rights and obligations under the Tech Transfer Agreement and the DRI Sublicense were transferred to NovaMedica. Under the Tech Transfer Agreement, in certain cases, the Company is required to assist NovaMedica, and NovaMedica is required to reimburse the Company for any out-of-pocket expenses incurred in providing this assistance, including travel-related expenses.

Eddingpharm—In April 2013, the Company entered into a License and Development Agreement (the "Eddingpharm License Agreement") and a Series B-1 purchase agreement (the

"Eddingpharm Purchase Agreement") with Eddingpharm International Company Limited ("Eddingpharm"). Under the terms of the Eddingpharm License Agreement, Eddingpharm, in exchange for rights to develop and commercialize entinostat in China and certain other Asian countries, purchased $5.0 million of Series B-1 and agreed to make certain contingent milestone and royalty payments based on revenue targets. In certain cases, the Company is required to assist Eddingpharm, and Eddingpharm is required to reimburse the Company for any out-of-pocket expenses incurred in providing this assistance, including reimbursement for person-hours above a certain cap.

Lease Commitments

In December 2013, the Company entered into a 40-month lease for office space in Waltham, Massachusetts. The Company also leases office equipment, which is accounted for as a capital lease. The leased assets are included in property, plant and equipment, at cost.

Future annual minimum payments as of December 31, 2013, are as follows (in thousands):

	Operating Leases	Capital Lease Obligations
For the years ended December 31		
2014	$ 86	$ 3
2015	118	4
2016	123	3
2017	31	4
2018	—	3
Total minimum lease payments	$ 358	$ 17
Less amounts representing interest		6
Present value of net minimum lease payments		$ 11

Rent expense for operating leases is calculated on a straight-line basis and amounted to $0.1 million and $0.1 million for the years ended December 31, 2012 and 2013, respectively.

16. Employee Benefit Plan

The Company has a Section 401(k) defined contribution savings plan for its employees. The plan covers substantially all employees who meet minimum age and service requirements and allows participants to defer a portion of their annual compensation on a pretax basis, subject to legal limitations. Company contributions to the plan may be made at the discretion of the Board. For the two years ended December 31, 2013, the Company had made no contributions to the plan.

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December 31, 2013

17. Related-party Transactions

In September 2011, the Company engaged an individual to assist the Company in business development and strategic planning activities. In March 2012, the individual was hired as the Company's Chief Executive Officer and appointed as a member of the Board. For the year ended December 31, 2012, the Company had incurred costs associated with this engagement of approximately $0.1 million. There were no expenses incurred after the individual became an employee.

As of December 31, 2012, an aggregate $16.2 million of principal outstanding under the convertible notes and $1.7 million of related accrued interest were held by stockholders of the Company. Interest expense related to the convertible notes held by these stockholders was $4.0 million and $0.3 million for the years ended December 31, 2012 and 2013, respectively.

18. Subsequent Events

The Company has evaluated subsequent events for financial statement purposes occurring through February 28, 2014, the date that these consolidated financial statements were originally issued, and June 4, 2014, the date on which the retrospectively revised consolidated financial statements were reissued (as a result of the reverse stock split discussed below), and determined that no additional subsequent events had occurred that would require recognition in these consolidated financial statements and that all subsequent events that require disclosure have been disclosed.

On January 23, 2014, the Company increased the maximum number of shares that can be issued under 2007 Plan from 813,962 to 1,002,172.

On January 23, 2014, the Company granted 107,854 stock options. The grant date fair value of these awards was $1.1 million and will be recognized over the requisite service period ranging from two and a half to four years.

On February 4, 2014, the Company granted 108,263 stock options. The grant date fair value of these awards was $1.2 million and will be recognized over the requisite service period of four years.

On February 25, 2014, the Company granted a consultant a non-qualified stock option to purchase 14,242 shares of common stock with an exercise price of $0.00123 per share. The option expires on the earlier to occur of (i) the termination of the consulting agreement and (ii) June 30, 2014. The shares of common stock issuable upon exercise of the option are subject to the Company's right of repurchase in accordance with the time-based vesting schedule set forth in the consulting agreement.

On June 3, 2014, the Company effected a 1-for-12.3 reverse stock split of the Company's common stock and convertible preferred stock. All share and per share data shown in the accompanying consolidated financial statements and related notes have been retroactively revised to reflect the reverse stock split.

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)

CONDENSED CONSOLIDATED BALANCE SHEETS
(In thousands, except share and per share data)

	December 31, 2013	June 30, 2014 (unaudited)	Pro forma June 30, 2014 (unaudited)
ASSETS			
Current assets:			
Cash and cash equivalents	$ 10,104	$ 4,680	
Restricted cash	50	51	
Short-term investments	4,022	—	
Short-term deposits	138	330	
Prepaid expenses and other current assets	230	110	
Total current assets	14,544	5,171	
Property and equipment, net	40	33	
Other assets	2,477	4,456	
Total assets	$ 17,061	$ 9,660	
LIABILITIES, CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' (DEFICIT) EQUITY			
Current liabilities:			
Accounts payable	$ 1,077	$ 928	
Accrued expenses and other current liabilities	1,653	3,694	
Total current liabilities	2,730	4,622	
Long-term liabilities:			
Common stock warrant liability	2,482	688	
Other long-term liabilities	—	40	
Total long-term liabilities	2,482	728	
Total liabilities	5,212	5,350	
Convertible preferred stock *(Note 7)*	140,324	143,562	$ —
Stockholders' (deficit) equity:			
Series A convertible preferred stock, $0.001 par value, 4,390,243 shares authorized at December 31, 2013 and June 30, 2014; 875,545 shares issued and outstanding at December 31, 2013 and June 30, 2014; and none issued or outstanding pro forma (unaudited)	7,231	7,231	—
Common stock, $0.0001 par value, 9,837,398 shares authorized at December 31, 2013 and June 30, 2014; 70,722 and 73,152 shares issued and outstanding at December 31, 2013 and June 30, 2014; and 100,000,000 shares authorized; 7,880,745 shares issued and outstanding pro forma (unaudited)	1	1	1
Additional paid-in capital	—	—	150,793
Deficit accumulated during the development stage	(135,707)	(146,484)	(146,484)
Total stockholders' (deficit) equity	(128,475)	(139,252)	$ 4,310
Total liabilities, convertible preferred stock and stockholders' (deficit) equity	$ 17,061	$ 9,660	

The accompanying notes are an integral part of these condensed consolidated financial statements.

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)
(unaudited)

CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(In thousands, except share and per share data)

	Six Months Ended June 30,		Period from October 11, 2005 (Date of Inception) to June 30, 2014
	2013	2014	
Operating expenses:			
Research and development	$ 1,304	$ 7,011	$ 59,051
General and administrative	2,104	3,296	30,916
Total operating expenses	3,408	10,307	89,967
Other (expense) income:			
Interest (expense) income, net	(596)	5	(7,431)
Change in fair value of common stock warrant liability	(586)	1,794	(1,581)
Change in fair value of convertible preferred stock warrant liability	128	—	415
Change in fair value of tranche liability	(618)	—	(3,144)
Change in fair value of embedded derivative	—	—	1,530
Other income	130	—	119
Total other (expense) income	(1,542)	1,799	(10,092)
Net loss and comprehensive loss	$ (4,950)	$ (8,508)	$ (100,059)
Net income (loss) attributable to common stockholders:			
Basic	$ 71	$ (11,746)	
Diluted	$ (3,539)	$ (11,746)	
Net income (loss) per share attributable to common stockholders:			
Basic	$ 1.41	$ (162.45)	
Diluted	$ (0.74)	$ (162.45)	
Weighted-average number of common shares used in computing net income (loss) per share attributable to common stockholders:			
Basic	50,397	72,306	
Diluted	4,775,040	72,306	
Pro forma net loss per share attributable to common stockholders—basic and diluted		$ (1.31)	
Pro forma weighted-average common shares used in net loss per share applicable to common stockholders— basic and diluted		7,879,899	

The accompanying notes are an integral part of these condensed consolidated financial statements.

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)
(unaudited)

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Six Months Ended June 30,		Period from October 11, 2005 (Date of Inception) to June 30, 2014
	2013	2014	
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net loss	$(4,950)	$ (8,508)	$ (100,059)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation	8	7	324
Stock-based compensation	825	963	3,199
Noncash research and development expense	—	—	463
Change in fair value of embedded derivative	—	—	(1,530)
Change in fair value of tranche liability	618	—	3,144
Change in fair value of warrants	458	(1,794)	1,271
Gain recognized on extinguishment of common stock warrants	(133)	—	(133)
Amortization of debt discount	—	—	4,583
Amortization of debt issuance and deferred financing costs	148	—	607
Realized gain on short-term investments	—	—	2
Amortization and accretion of investments	—	34	(179)
Loss on sale of property and equipment	5	—	18
Changes in operating assets and liabilities:			
Short-term deposits	60	(192)	(363)
Prepaid expenses and other assets	(43)	118	(111)
Accounts payable	6	(255)	235
Accrued expenses and other liabilities	586	1,311	4,609
Net cash used in operating activities	(2,412)	(8,316)	(83,920)
CASH FLOWS FROM INVESTING ACTIVITIES:			
Purchases of property and equipment	—	—	(361)
Proceeds from sale of property and equipment	—	—	7
Decrease in restricted cash	33	—	(50)
Purchases of short-term investments	—	(1,298)	(42,952)
Proceeds from sales and maturities of short-term investments	—	5,286	43,130
Net cash provided by (used in) investing activities	33	3,988	(226)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Principal payments on capital lease obligation	(1)	(1)	(23)
Proceeds from issuance of common stock	—	6	51
Proceeds from issuance of convertible preferred stock, net	2,306	—	71,370
Proceeds from issuance of debt	745	—	27,166
Deferred issuance costs	(107)	(1,101)	(3,572)
Payments on term loan	(404)	—	(6,180)
Proceeds from issuance of common stock and Series A warrants	—	—	14
Net cash provided by (used in) financing activities	2,539	(1,096)	88,826
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	160	(5,424)	4,680
CASH AND CASH EQUIVALENTS—beginning of period	537	10,104	—
CASH AND CASH EQUIVALENTS—end of period	$ 697	$ 4,680	$ 4,680

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)
(unaudited)

CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (continued)
(In thousands)

	Six Months Ended June 30,		Period from October 11, 2005 (Date of Inception) to June 30, 2014
	2013	2014	
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:			
Interest paid	$ 192	$ 1	$ 1,354
SUPPLEMENTAL DISCLOSURES OF NONCASH FINANCING ACTIVITIES:			
Conversion of Series A convertible preferred stock into Series A-1 convertible preferred stock and cancellation of warrants with fair value of $1,686 pursuant to recapitalization	$ 4,433	$ —	$ 4,433
Conversion of convertible notes and accrued interest into Series B-1 convertible preferred stock and cancellation of warrants with fair value of $3,341 and forced conversion into Series B convertible preferred stock pursuant to recapitalization	$23,127	$ —	$ 23,127
Extinguishment and modification of convertible preferred stock	$ —	$ —	$ 32,520
Accretion of convertible preferred stock to redemption value	$ 1,347	$ —	$ 17,875
Accretion of dividends on convertible preferred stock	$ 1,199	$3,238	$ 7,197
Conversion of notes payable to Series A convertible preferred stock	$ —	$ —	$ 3,500
Offering proceeds allocated to Series A convertible preferred detachable warrants	$ —	$ —	$ 2,103
Note offering proceeds allocated to common stock warrants	$ —	$ —	$ 2,342
Note offering proceeds allocated to embedded derivative liability	$ —	$ —	$ 1,816
Note offering proceeds allocated to beneficial conversion feature	$ —	$ —	$ 425
Recognition and de-recognition of tranche liability	$ 206	$ —	$ (3,144)
Deposits included in long-term liabilities	$ —	$ —	$ 5
Equipment purchased under capital lease obligations	$ —	$ —	$ 34
Deferred issuance costs included in accounts payable and accrued expenses	$ 95	$ 878	$ 1,788

The accompanying notes are an integral part of these condensed consolidated financial statements.

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

June 30, 2014

1. Nature of Business and Summary of Significant Accounting Policies

Nature of Business—Syndax Pharmaceuticals, Inc. (the "Company") is a late-stage biopharmaceutical company focused on the development and commercialization of its lead product candidate, entinostat, an epigenetic therapy for treatment-resistant cancers. The Company was incorporated under the laws of the State of Delaware on October 11, 2005 (date of inception) and is headquartered in Waltham, Massachusetts.

Development Stage Company—Since its inception, the Company has devoted its efforts principally to research and development and raising capital. As a result, the Company is considered a development stage company. The Company is subject to risks common to companies in the development stage, including, but not limited to, successful development of therapeutics, obtaining additional funding (discussed further below), protection of proprietary therapeutics, compliance with government regulations, fluctuations in operating results, dependence on key personnel and collaborative partners, and risks associated with industry changes.

Basis of Presentation—The accompanying condensed balance sheet as of June 30, 2014, statements of operations and comprehensive loss and statements of cash flows for the six months ended June 30, 2013 and 2014 and the period from October 11, 2005 (date of inception) to June 30, 2014 are unaudited. The interim unaudited financial statements have been prepared on the same basis as the annual audited financial statements; and in the opinion of management, reflect all adjustments, which include only normal recurring adjustments, necessary for the fair statement of our financial position as of June 30, 2014 and the results of our operations, our comprehensive loss and our cash flows for the six months ended June 30, 2013 and 2014 and for the period from October 11, 2005 (date of inception) to June 30, 2014. The financial data and other information disclosed in these notes as of June 30, 2013 and 2014 and for the six months ended June 30, 2013 and 2014 and the period from October 11, 2005 (date of inception) to June 30, 2014 are unaudited. The results for the six months ended June 30, 2014 are not necessarily indicative of results to be expected for the year ending December 31, 2014, any other interim periods, or any future year or period.

Reverse stock split—On June 3, 2014, the board of directors and the stockholders of the Company approved a one-for-12.3 reverse stock split of the Company's outstanding common stock and convertible preferred stock, which was effected on June 3, 2014. Stockholders entitled to fractional shares as a result of the reverse stock split will receive a cash payment in lieu of receiving fractional shares. All of the Company's historical share and per share information shown in the accompanying financial statements and related notes have been retroactively adjusted to give effect to this reverse stock split.

Management's Plans—The Company has financed its operations to date primarily with the proceeds from the sale of convertible preferred stock and the issuance of notes payable. The Company's long-term success is dependent upon its ability to successfully develop and market entinostat, earn revenue, obtain additional capital when needed, and ultimately, achieve profitable operations. The Company has incurred net losses since inception and has a deficit accumulated during the development stage of $146.5 million as of June 30, 2014. The Company anticipates that it will be several years before entinostat is approved and the Company begins to

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
June 30, 2014

generate revenue; accordingly, management fully expects to incur substantial losses on the ongoing development of entinostat and does not expect to achieve positive cash flow from operations for at least the next five years. As a result, the Company will continue to require additional capital to move forward with its business plan. While certain amounts of this additional capital were raised in the past, there can be no assurance that funds necessary beyond these amounts will be available in amounts or on terms sufficient to ensure ongoing operations.

The Company's management believes that the June 30, 2014 cash balance will be sufficient to fund the Company's operations through October 31, 2014, and additional capital will be needed thereafter. The foregoing conditions raise substantial doubt about the Company's ability to continue as a going concern for a reasonable period of time. The condensed consolidated financial statements do not include any adjustments relating to the recoverability and classification of recorded assets and liabilities that might be necessary should the Company be unable to continue as a going concern. In the event that sufficient funds were not available, management would expect to significantly reduce expenditures to conserve cash, which could involve scaling back or curtailing development activity for entinostat, including clinical trial activity.

Principles of Consolidation—The accompanying condensed consolidated financial statements include the accounts of the Company and its wholly owned subsidiary in the United Kingdom. There have been no activities for this entity to date.

Unaudited Pro Forma Information—The unaudited pro forma consolidated balance sheet information as of June 30, 2014, reflects (i) the conversion of 875,545 shares of Series A convertible preferred stock ("Series A") into 175,107 shares of common stock, (ii) the conversion of an aggregate of 7,632,486 shares of Series A-1 convertible preferred stock ("Series A-1"), Series B convertible preferred stock ("Series B") and Series B-1 convertible preferred stock ("Series B-1") into 7,632,486 shares of common stock, which along with the 73,152 shares of outstanding common stock will reflect an aggregate total of 7,880,745 shares of common stock immediately prior to the closing of the proposed initial public offering ("IPO").

Significant Accounting Policies—The Company's significant accounting policies are disclosed in the audited consolidated financial statements for the year ended December 31, 2013 included elsewhere in this prospectus. Since the date of those financial statements, there have been no changes to our significant accounting policies.

Use of Estimates—The preparation of condensed consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities at the date of the condensed consolidated financial statements and the reported amounts of costs and expenses during the reporting period. The Company bases estimates and assumptions on historical experience when available and on various factors that it believes to be reasonable under the circumstances. The Company evaluates its estimates and assumptions on an ongoing basis. The Company's actual results may differ from these estimates under different assumptions or conditions.

SYNDAX PHARMACEUTICALS, INC.
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NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
June 30, 2014

Segment Reporting—Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision maker in making decisions regarding resource allocation and assessing performance. The Company has one operating segment.

Other Assets—Other assets consist of long-term security deposits and deferred issuance costs. Deferred issuance costs primarily consist of direct incremental legal and accounting fees relating to the Company's IPO and its debt and are capitalized as incurred. As of December 31, 2013 and June 30, 2014, the Company had capitalized deferred IPO issuance costs of $2.4 million and $4.2 million, respectively; and capitalized debt issuance costs of $0 and $0.3 million, respectively. Future IPO issuance costs will be deferred until the completion of the IPO, at which time they will be reclassified to additional paid-in capital as a reduction of the IPO proceeds. If the Company terminates its plan for an IPO, any costs deferred will be expensed immediately. The deferred debt issuance costs are related to the new term loan agreement and will be amortized over the period that the debt is outstanding.

2. Net Income (Loss) per Share Attributable to Common Stockholders

The Company computes net income (loss) per share attributable to common stockholders in accordance with the two-class method. Under the two-class method, net income is allocated between common stock and other participating securities based on their participation rights. Net losses are not allocated to the preferred stockholders for computing net loss per share under the two-class method because preferred stockholders do not have contractual obligations to share in the losses of the Company. Basic net income (loss) per share is calculated by dividing income allocable to common stockholders by the weighted-average number of common stock outstanding.

Diluted net income (loss) per share attributable to common stockholders is computed using the more dilutive of (a) the two-class method, or (b) the if-converted method or treasury stock method, as applicable, to the potentially dilutive instruments. The Company allocates net income first to the preferred stockholders based on dividend rights and then to common and preferred stockholders based on ownership interests. The weighted-average number of common shares outstanding gives effect to all potentially dilutive common equivalent shares, including outstanding stock options, warrants and convertible preferred stock. For the six months ended June 30, 2013, the Company computed diluted net loss attributable to common stockholders by using the if-converted method, as it resulted in a more dilutive effect on net income (loss) per share than the two-class method. During periods in which the Company incurs net losses, both basic and diluted loss per share are calculated by dividing the net loss by the

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

June 30, 2014

weighted-average shares outstanding. The following table summarizes the computation of basic and diluted net income (loss) per share attributable to common stockholders of the Company (in thousands, except share data):

	Six Months Ended June 30,	
	2013	2014
Numerator—basic and diluted:		
Net loss	$ (4,950)	$ (8,508)
Conversion of Series A into Series A-1 and cancellation of warrants pursuant to the recapitalization	4,433	—
Conversion of convertible notes and accrued interest and cancellation of warrants into Series B-1 and forced conversion into Series B pursuant to the recapitalization	4,425	—
Accretion of convertible preferred stock dividends	(1,199)	(3,238)
Accretion of convertible preferred stock to redemption value	(1,347)	—
Undistributed earnings allocated to participating securities	(1,291)	—
Net income (loss) attributable to common stockholders—basic	71	(11,746)
Conversion of Series A into Series A-1 and cancellation of warrants pursuant to the recapitalization	(4,433)	—
Conversion of convertible notes and accrued interest and cancellation of warrants into Series B-1 and forced conversion into Series B pursuant to the recapitalization	(4,425)	—
Accretion of convertible preferred stock dividends	1,199	—
Accretion of convertible preferred stock to redemption value	1,347	—
Undistributed earnings allocated to participating securities	1,291	—
Change in fair value of common stock warrant liability	586	—
Change in fair value of convertible preferred stock warrant liability	(128)	—
Change in fair value of tranche liability	618	—
Interest expense on convertible notes payable	335	—
Net loss attributable to common stockholders—diluted	$ (3,539)	$ (11,746)
Denominator—basic and diluted:		
Weighted average shares outstanding—basic	50,397	72,306
Weighted-average number of shares issuable upon conversion of convertible notes, based on if-converted method	632,102	—
Weighted-average number of shares issuable upon conversion of preferred stock, based on if-converted method	3,911,020	—
Weighted average number of shares issuable upon exercise of outstanding stock options, based on treasury stock method	67,337	—
Weighted average number of shares issuable upon exercise of outstanding warrants, based on treasury stock method	114,184	—
Weighted average number of common shares used in computing net loss per share attributable to common stockholders—diluted	4,775,040	72,306

SYNDAX PHARMACEUTICALS, INC.
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NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

June 30, 2014

The following potentially dilutive securities have been excluded from the computation of diluted weighted-average shares outstanding because such securities have an antidilutive impact (in common stock equivalent shares):

	Six Months Ended June 30,	
	2013	2014
Convertible preferred stock	—	7,807,593
Options to purchase common stock	44,228	923,874
Common stock warrants	—	156,825

The unaudited pro forma basic and diluted loss per share attributable to common stockholders for the six months ended June 30, 2014 has been computed using the weighted-average number of shares of common stock outstanding after giving pro forma effect to the automatic conversion of all shares of convertible preferred stock into shares of common stock.

Upon conversion of the convertible preferred stock into common stock in the event of an IPO, the holders of the convertible preferred stock are not entitled to receive undeclared dividends. Accordingly, the impact of the accretion of accrued but unpaid dividends has been excluded from the determination of net loss attributable to common stockholders as the holders of the convertible preferred stock are not entitled to receive accrued but unpaid dividends upon such conversion. The gains and losses associated with the changes in the fair value of the common stock warrant have been excluded from the determination of net loss attributable to common stockholders as these re-measurements would not have occurred if the common stock warrant converted at the beginning of the period presented. Unaudited pro forma basic and diluted loss per share attributable to common stockholders are computed as follows (in thousands, except share and per share data):

	Six Months Ended June 30, 2014 (unaudited)
Pro forma Net Loss per Share—Basic and Diluted	
Numerator—basic and diluted:	
Net loss attributable to common stockholders—basic and diluted	$ (11,746)
Accretion of convertible preferred stock dividends	3,238
Change in fair value of common stock warrant liability	(1,794)
Net loss attributable to common stockholders—basic and diluted	$ (10,302)
Denominator—basic and diluted:	
Weighted-average number of shares outstanding—basic and diluted	72,306
Adjustment for assumed effect of conversion of convertible preferred stock	7,807,593
Pro forma weighted-average number of common shares used to compute pro forma net loss per share—basic and diluted	7,879,899
Pro forma net loss per share—basic and diluted	$ (1.31)

SYNDAX PHARMACEUTICALS, INC.
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NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
June 30, 2014

3. Significant Agreements

Clinical Trial Agreement with Eastern Cooperative Oncology Group—In March 2014, the Company entered into a clinical trial agreement (the "Agreement") with Eastern Cooperative Oncology Group, a contracting entity for the Eastern Cooperative Oncology Group—American College of Radiology Imaging Network Cancer Research Group ("ECOG-ACRIN"), that describes the parties' obligations with respect to the NCI-sponsored pivotal Phase 3 clinical trial of entinostat. Under the terms of the Agreement, ECOG-ACRIN will perform this clinical trial in accordance with the clinical trial protocol and a mutually agreed scope of work. The Company will provide a fixed level of financial support for the clinical trial through an upfront payment of $695,000 and a series of time- and milestone-based payments of up to $970,000, and is obligated to supply entinostat and placebo to ECOG-ACRIN for use in the clinical trial. The Company's aggregate payment obligations under the Agreement are approximately $19.4 million.

Data and inventions from the Phase 3 clinical trial are owned by ECOG-ACRIN. The Company has access to the data generated in the clinical trial, both directly from ECOG-ACRIN under the Agreement as well as from the NCI. Additionally, ECOG-ACRIN has granted the Company a non-exclusive royalty-free license to any inventions or discoveries that are derived from entinostat as a result of its use during the clinical trial, along with a first right to negotiate an exclusive license to any of these inventions or discoveries. Either party may terminate the Agreement in the event of an uncured material breach by the other party or if the FDA or NCI withdraws the authorization to perform the clinical trial in the United States. The parties may jointly terminate the Agreement if the parties agree that safety-related issues support termination of the clinical trial.

The Company records the appropriate clinical trial expenses in its financial statements by matching those expenses with the period in which the services and efforts are expended. The Company accounts for these expenses according to the progress of the clinical trial as measured by patient enrollment and the timing of various aspects of the clinical trial. The Company determines accrual estimates through financial models, taking into account discussion with applicable personnel and ECOG-ACRIN as to the progress or state of consummation of the clinical trial or the services completed. Through June 30, 2014, the Company recognized $0.5 million of research and development expense related to the Agreement.

Bayer Pharma AG (formerly known as Bayer Schering Pharma AG)—In March 2007, the Company entered into a license agreement (the "Bayer Agreement") with Bayer Schering Pharma AG ("Bayer") for a worldwide, exclusive license to develop and commercialize entinostat and any other products containing the same active ingredient. Under the terms of the Bayer Agreement, the Company paid a nonrefundable up-front license fee of $2.0 million and is responsible for the development and marketing of entinostat. The Company recorded the $2.0 million license fee as research and development expense during the year ended December 31, 2007, as it had no alternative future use. The Company will pay Bayer royalties on a sliding scale based on net sales, if any, and make future milestone payments to Bayer of up to $150.0 million in the event that certain specified development and regulatory goals and sales levels are achieved. In June 2014, a development milestone was achieved, and the Company recorded $2.0 million of research and development expense.

SYNDAX PHARMACEUTICALS, INC.
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NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
June 30, 2014

In connection with the Bayer Agreement, the Company issued to Bayer a warrant to purchase the number of shares of the Company's common stock equal to 1.75% of the shares of common stock outstanding on a fully diluted basis as of the earlier of the date the warrant is exercised or the closing of the Company's IPO. The warrant contains anti-dilution protection to maintain Bayer's potential ownership at 1.75% of the shares of common stock outstanding on a fully diluted basis, which requires that the actual number of shares of common stock issuable pursuant to the warrant be increased or decreased for any changes in the fully diluted shares of common stock outstanding. The warrant is exercisable at an exercise price of $1.23 per share and expires upon the earlier of the 10-year anniversary of the closing of the Company's IPO and the date of the consummation of a disposition transaction. The warrant is classified as a long-term liability and recorded at fair value with the changes in the fair value recorded in other income (expense). The Company uses the Black-Scholes option-pricing model to determine the fair value of the warrant. The total shares exercisable under the warrant, the fair value associated with the warrant and the Black-Scholes option-pricing model assumptions used to value the shares of common stock issuable pursuant to the warrant are as follows:

As of June 30,	Total Shares of Common Stock Issuable Under the Warrant	Weighted-Average Exercise Price	Fair Value of Common Stock	Estimated Volatility	Risk-Free Interest Rate	Estimated Dividend Yield	Estimated Remaining Contractual Life (in Years)	Fair Value of Warrant Liability as of June 30,
2013	125,044	$ 1.23	$ 9.84	66%	1.60%	0.0%	6.88	$1,125
2014	156,825	$ 1.23	$ 5.05	70%	2.18%	0.0%	7.35	$ 688

4. Fair Value Measurements

The carrying amounts of cash and cash equivalents, restricted cash, accounts payable and accrued expenses approximated their estimated fair values due to the short-term nature of these financial instruments.

Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value are performed in a manner to maximize the use of observable inputs and minimize the use of unobservable inputs. The accounting standard describes a fair value hierarchy based on three levels of inputs, of which the first two are considered observable and the last unobservable, that may be used to measure fair value, which are the following:

Level 1—Quoted prices in active markets that are accessible at the market date for identical unrestricted assets or liabilities.

Level 2—Inputs other than Level 1 that are observable, either directly or indirectly, such as quoted prices for similar assets or liabilities; quoted prices in markets that are not active; or other inputs for which all significant inputs are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

June 30, 2014

Level 3 —Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

During the periods presented, the Company has not changed the manner in which it values assets and liabilities that are measured at fair value using Level 3 inputs. The Company recognizes transfers between levels of the fair value hierarchy as of the end of the reporting period. There were no transfers within the hierarchy during the periods presented. A summary of the assets and liabilities carried at fair value in accordance with the hierarchy defined above is as follows (in thousands):

		Fair Value Measurements Using		
	Total Carrying Value	Quoted Prices in Active Markets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
December 31, 2013				
Assets:				
Cash equivalents	$10,093	$4,538	$ 5,555	$ —
Short-term investments	4,022	—	4,022	—
	$14,115	$4,538	$ 9,577	$ —
Liability:				
Common stock warrant liability	$ 2,482	$ —	$ —	$ 2,482
June 30, 2014				
Assets:				
Cash equivalents	$ 4,097	$3,216	$ 881	$ —
Liability:				
Common stock warrant liability	$ 688	$ —	$ —	$ 688

Cash equivalents of $4.5 million and $3.2 million as of December 31, 2013 and June 30, 2014, respectively, consisted of money market funds and are classified within Level 1 of the fair value hierarchy because they are valued using quoted market prices in active markets. Cash equivalents of $5.6 million and $0.9 million as of December 31, 2013 and June 30, 2014, respectively, consisted of highly rated corporate bonds and are classified within Level 2 of the fair value hierarchy because pricing inputs are other than quoted prices in active markets, which are either directly or indirectly observable as of the reporting date, and fair value is determined through the use of models or other valuation methodologies.

Short-term investments of $4.0 million as of December 31, 2013 consisted of commercial paper and highly rated corporate bonds and are classified within Level 2 of the fair value hierarchy because pricing inputs are other than quoted prices in active markets, which are either directly or indirectly observable as of the reporting date; and fair value is determined through the use of models or other valuation methodologies.

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)

NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)

June 30, 2014

The short-term investments are classified as available-for-sale securities. As of June 30, 2014, the Company did not hold any available-for-sale securities. There have been no significant realized or unrealized gains or losses on available-for-sale securities for the periods presented.

The convertible common stock warrant liability was recorded at fair value determined by using the Black-Scholes option-pricing model. This method of valuation involves using inputs such as the fair value of the Company's convertible preferred and common stock, stock price volatility, contractual term of the warrants, risk-free interest rates, and dividend yields. Due to the nature of these inputs, the valuation of the warrants was considered a Level 3 measurement. See Note 3 for further discussion of the accounting for the Bayer common stock warrant, as well as for a summary of the significant inputs and assumptions used to determine the fair value of the warrant.

The convertible preferred stock tranche liability was recorded at fair value using the Black-Scholes option-pricing model on the date of the issuance using the following assumptions: fair value of convertible preferred stock of $11.19, expected life of 0.08 to 0.75 years, risk-free interest rate of 0.04% to 0.13%, and expected volatility of 50%.

A roll-forward of the recurring fair value measurements of the convertible preferred stock warrants liability, common stock warrants liability, embedded derivative liability, and convertible preferred stock tranche liability categorized with Level 3 inputs are as follows (in thousands):

	Convertible Preferred Stock Warrant Liability	Common Stock Warrant Liability	Embedded Derivative Liability	Convertible Preferred Stock Tranche Liability
Balance—December 31, 2012	1,814	3,880	287	—
Tranche liability on stock issuance	—	—	—	206
Change in fair value	(128)	586	—	618
Cancellation of warrants and embedded derivative pursuant to recapitalization	(1,686)	(3,341)	(287)	—
Balance—June 30, 2013	$ 0	$ 1,125	$ —	$ 824

	Common Stock Warrant Liability
Balance—December 31, 2013	$ 2,482
Change in fair value	(1,794)
Balance—June 30, 2014	$ 688

The warrants to purchase common stock and convertible preferred stock issued to investors and note holders were canceled and the embedded derivative was eliminated in March 2013 as a part of the recapitalization, which is disclosed in the audited consolidated financial statements for the year ended December 31, 2013, included elsewhere in this prospectus.

SYNDAX PHARMACEUTICALS, INC.
(a development stage company)
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
June 30, 2014

5. Accrued Expenses

Accrued expenses consisted of the following (in thousands):

	December 31, 2013	June 30, 2014
Accrued license fees	$ 225	$2,025
Accrued professional fees	485	420
Accrued compensation and related costs	569	408
Accrued clinical costs	169	322
Other	205	519
Total accrued expenses	$ 1,653	$3,694

6. Convertible Debt

As of December 31, 2012, the Company had convertible notes outstanding of $16.9 million, which included an aggregate of $16.9 million of principal and $0 of unamortized debt discount. In 2013, the Company issued an additional $0.7 million of convertible notes. Pursuant to the Series B-1 financing and the recapitalization, all outstanding convertible notes were converted to shares of various classes of convertible preferred stock, and as of December 31, 2013, no convertible notes were outstanding.

7. Convertible Preferred Stock

In March 2013, the Company effected a recapitalization, which resulted in significant changes in the various classes of convertible preferred stock. As part of the recapitalization, shares of the then-outstanding Series A were subject to a 10-for-1 stock split, with the related conversion price and value reduced accordingly. Convertible preferred stock consisted of the following for the periods presented (in thousands, except share data):

December 31, 2013	Preferred Shares Designated	Issuance Date	Preferred Shares Issued and Outstanding	Liquidation Preference	Carrying Value
Series A-1	3,951,219	March 2013	3,502,185	$ 41,760	$ 59,394
Series B	4,227,642	March and August 2013	340,302	2,933	5,084
Series B-1	4,146,341	March, April, July, August and November 2013	3,789,999	75,846	75,846
Totals					$140,324
Series A	4,390,243	March and August 2013	875,545	—	$ 7,231

June 30, 2014	Preferred Shares Designated	Issuance Date	Preferred Shares Issued and Outstanding	Liquidation Preference	Carrying Value
Series A-1	3,951,219	March 2013	3,502,185	$ 43,315	$ 60,949
Series B	4,227,642	March and August 2013	340,302	2,933	5,084
Series B-1	4,146,341	March, April, July, August and November 2013	3,789,999	77,529	77,529
Totals					$143,562
Series A	4,390,243	March and August 2013	875,545	—	$ 7,231

SYNDAX PHARMACEUTICALS, INC.
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June 30, 2014

As of June 30, 2014, the Company has recorded cumulative dividends on Series A-1 and Series B-1 of $4.1 million and $3.3 million, respectively.

8. Stock-based Compensation

In January 2014, the Board increased the maximum number of shares that can be issued under the 2007 Plan to 1,002,172. As of June 30, 2014, there were 72,280 shares available for issuance under the 2007 Plan.

The Company recognized stock-based compensation expense related to the issuance of stock option awards to employees and non-employees in the condensed consolidated statements of operations and comprehensive loss as follows (in thousands):

	Six Months Ended June 30,	
	2013	2014
Research and development	$ 158	$ 268
General and administrative	667	695
Total	$ 825	$ 963

During the six months ended June 30, 2014, the Company granted 230,359 stock options to certain executives, employees, directors and consultants. The grant date fair value of these options was $2.3 million, or $10.33 per share on a weighted-average basis, and will be recognized as compensation expense over the requisite service period of three to four years. There were 2,430 options exercised for the six months ended June 30, 2014, resulting in total proceeds of $6,000. In accordance with Company policy, the shares were issued from a pool of shares reserved for issuance under the stock plans described above.

As of June 30, 2014, there was $3.2 million of unrecognized compensation cost related to employee and non-employee unvested stock options granted under the 2007 Plan, which is expected to be recognized over a weighted-average remaining service period of 2.64 years. Since inception, stock compensation costs have not been capitalized by the Company.

9. Income Taxes

The Company has not recorded any net tax provision for the periods presented due to the losses incurred and the need for a full valuation allowance on deferred tax assets. The difference between the income tax expense at the U.S. federal statutory rate and the recorded provision is primarily due to the valuation allowance provided on all deferred tax assets.

SYNDAX PHARMACEUTICALS, INC.
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NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
June 30, 2014

10. Term Loan

In June 2014, the Company entered into a loan and security agreement with Solar Capital Ltd. ("Solar"), as collateral agent and lender, consisting of a $15.0 million senior secured term loan facility. The loan is secured by substantially all of the Company's existing and after-acquired assets except its intellectual property, but including right of payment with respect to any such intellectual property and all proceeds from the disposition of any such intellectual property. The intellectual property of the Company is subject to a negative pledge. Interest will accrue at a floating rate per annum equal to LIBOR plus 8.8%, payable monthly in arrears. The term loan facility has a maturity date of 48 months after the effective date. At the Company's request and upon the meeting of certain conditions, including the completion of an IPO resulting in net cash proceeds of $37.0 million on or before September 30, 2014, an initial term loan in the aggregate principal amount of $5.0 million will be funded within ten business days after the completion of the IPO. If the initial term loan is funded, at the Company's request, a second term loan of up to $10.0 million may be funded in two $5.0 million increments on or prior to June 30, 2015. If the Company does not borrow the initial term loan within ten business days after the completion of an IPO, it is required to pay a non-use fee of $100,000. In connection with the term loan facility, the Company paid a closing fee of $150,000 and other transactional and legal costs of $120,000. Upon the completion of an IPO, the Company will be required to pay a $150,000 success fee that will be due on the earlier of the maturity date of the term loan facility or upon the occurrence of certain change of control or liquidity events. In addition, the Company is required to pay a final fee equal to 4% of the amount of term loans funded that will be due on the earlier of the maturity date of the term loan facility or upon the occurrence of certain change of control or liquidity events. As of June 30, 2014, there were no amounts outstanding under this term loan facility.

SYNDAX PHARMACEUTICALS, INC.
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NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS—(Continued)
June 30, 2014

11. Stockholders' Deficit

The following table presents the changes in convertible preferred stock and stockholders' deficit for the six months ended June 30, 2014 (in thousands, except share and per share data):

	Convertible Preferred Stock $0.001 Par Value		Series A Convertible Preferred Stock $0.001 Par Value		Common Stock $0.0001 Par Value		Additional Paid-In Capital	Deficit Accumulated During the Development Stage	Total Stockholders' Deficit
	Shares	Amount	Shares	Amount	Shares	Amount			
Balance as of December 31, 2013	7,632,486	$140,324	875,545	$7,231	70,722	$ 1	$ —	$ (135,707)	$ (128,475)
Accretion for convertible preferred stock dividends	—	3,238	—	—	—	—	(969)	(2,269)	(3,238)
Exercise of stock options	—	—	—	—	2,430	—	6	—	6
Stock-based compensation expense	—	—	—	—	—	—	963	—	963
Net loss	—	—	—	—	—	—	—	(8,508)	(8,508)
Balance as of June 30, 2014	7,632,486	$143,562	875,545	$7,231	73,152	$ 1	$ —	$ (146,484)	$ (139,252)

12. Subsequent Events

For the six months ended June 30, 2014, management has evaluated subsequent events through August 28, 2014, the date on which these interim financial statements were issued, and determined that no additional subsequent events would require recognition in these financial statements and that all subsequent events that required disclosure have been disclosed.

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You should rely only on the information contained in this prospectus and any free writing prospectus prepared by or on behalf of us or to which we have referred you. We have not authorized anyone to provide you with information that is different. We are offering to sell shares of our common stock, and seeking offers to buy shares of our common stock, only in jurisdictions where offers and sales are permitted. The information in this prospectus is complete and accurate only as of the date on the front cover of this prospectus, regardless of the time of delivery of this prospectus or any sale of shares of our common stock.

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Until and including , 2014 (25 days after the date of this prospectus), all dealers that buy, sell or trade shares of our common stock, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

Syndax

4,300,000 Shares

Common Stock

Deutsche Bank Securities

Jefferies

JMP Securities

Wedbush PacGrow Life Sciences

PRELIMINARY PROSPECTUS

, 2014

PART II
INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth the costs and expenses, other than underwriting discounts and commissions, payable in connection with the registration of the common stock hereunder. All amounts are estimates, except the SEC registration fee, the FINRA filing fee and the NASDAQ Global Market listing fee.

	Amount
SEC registration fee	$ 9,554
FINRA filing fee	10,900
NASDAQ Global Market listing fee	125,000
Accountants' fees and expenses	1,250,000
Legal fees and expenses	2,000,000
Transfer Agent's fees and expenses	10,000
Printing and engraving expenses	350,000
Miscellaneous	444,546
Total	$ 4,200,000

Item 14. Indemnification of Directors and Officers.

Section 102(b)(7) of the Delaware General Corporation Law, or DGCL, provides that a Delaware corporation, in its certificate of incorporation, may limit the personal liability of a director to the 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 derived an improper personal benefit;
- act or omission not in good faith or that involved intentional misconduct or a knowing violation of law;
- unlawful payment of dividends or redemption of shares; or
- breach of the director's duty of loyalty to the corporation or its stockholders.

Section 145(a) of the DGCL provides, in general, that a Delaware corporation may indemnify any person who was or is a party, or is threatened to be made a party, 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 the corporation) because that person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or other enterprise. The indemnity may include expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, so long as the person acted in good faith and in a manner he or she reasonably believed was 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 his or her conduct was unlawful.

Section 145(b) of the DGCL provides, in general, that a Delaware corporation may indemnify any person who was or is a party, or is threatened to be made a party, to any threatened, pending or completed action or suit by or in the right of the corporation to obtain a judgment in

its favor because the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or other enterprise. The indemnity may include expenses (including attorneys' fees) actually and reasonably incurred by the person in connection with the defense or settlement of such action, so long as the person acted in good faith and in a manner the person reasonably believed was in or not opposed to the corporation's best interests, except that no indemnification shall be permitted without judicial approval if a court has determined that the person is to be liable to the corporation with respect to such claim. Section 145(c) of the DGCL provides that, if a present or former director or officer has been successful in defense of any action referred to in Sections 145(a) and (b) of the DGCL, the corporation must indemnify such officer or director against the expenses (including attorneys' fees) he or she actually and reasonably incurred in connection with such action.

Section 145(g) of the DGCL provides, in general, that a corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or other enterprise against any liability asserted against and incurred by such person, in any such capacity, or arising out of his or her status as such, whether or not the corporation could indemnify the person against such liability under Section 145 of the DGCL.

Our amended and restated certificate of incorporation and our amended and restated bylaws, each of which will become effective immediately prior to the completion of this offering, provide for the indemnification of our directors and officers to the fullest extent permitted under the DGCL.

We entered into separate indemnification agreements with our directors and officers in addition to the indemnification provided for in our amended and restated bylaws. These indemnification agreements provide, among other things, that we will indemnify our directors and officers for certain expenses, including damages, judgments, fines, penalties, settlements and costs and attorneys' fees and disbursements, incurred by a director or officer in any claim, action or proceeding arising in his or her capacity as a director or officer of our company or in connection with service at our request for another corporation or entity. The indemnification agreements also provide for procedures that will apply in the event that a director or officer makes a claim for indemnification.

We also maintain a directors' and officers' insurance policy pursuant to which our directors and officers are insured against liability for actions taken in their capacities as directors and officers.

We intend to enter into an underwriting agreement, which provides for indemnification by the underwriters of us, our officers and directors, for certain liabilities, including liabilities arising under the Securities Act of 1933, as amended, or the Securities Act.

See also the undertakings set out in response to Item 17 herein.

Item 15. Recent Sales of Unregistered Securities.

The following lists set forth information regarding all securities sold or granted by us within the past three years that were not registered under the Securities Act (after giving effect to a 1-for-10 reverse stock split and a 1-for-12.3 reverse stock split of our common stock and convertible preferred stock effected on November 18, 2013 and June 3, 2014, respectively), and the consideration, if any, received by us for such securities:

Issuances of Capital Stock

(1) In March 2013, all outstanding shares of our Series A convertible preferred stock were recapitalized in a stock split whereby the holders of Series A convertible preferred stock received 10 shares of Series A convertible preferred stock for every one share owned. Each share of our Series A convertible preferred stock will convert into one-fifth of one share of our common stock upon completion of this offering.

(2) In March 2013, 3,939,957 shares of our Series A convertible preferred stock were converted into shares of our Series A-1 convertible preferred stock.

(3) In March, April, August and November 2013, we issued and sold, in a series of closings to 18 accredited investors, an aggregate of 3,535,442 shares of our Series B-1 convertible preferred stock in exchange for convertible debt, accrued interest and cash at a price per share of $11.19 and an aggregate of 148,153 shares of our Series B convertible preferred stock in exchange for convertible debt and accrued interest at a price per share of $11.19, for net proceeds of $20.6 million. Each share of our Series B-1 and Series B convertible preferred stock will convert into one share of our common stock upon completion of this offering.

(4) In July and November 2013, we issued and sold, in a series of closings to an accredited investor, an aggregate of 446,706 shares of our Series B-1 convertible preferred stock in exchange for cash at a price per share of $11.19, for gross proceeds of $5.0 million. Each share of our Series B-1 convertible preferred stock will convert into one share of our common stock upon completion of this offering.

(5) In August 2013, 437,772 shares of our Series A-1 convertible preferred stock were converted into shares of our Series A convertible preferred stock.

(6) In August 2013, 192,149 shares of our Series B-1 convertible preferred stock were converted into shares of our Series B convertible preferred stock.

(7) In November 2013, we issued 20,325 shares of our common stock to an investor as consideration for license and option rights granted to us.

(8) In March 2014, we issued 2,430 shares of our common stock at a price per share of $2.46 to one of our former employees pursuant to the exercise of stock options under our 2007 Plan for an aggregate purchase price of $5,980.

Convertible Note Financings and Warrants

(9) Between December 2011 and June 2012, in connection with a bridge loan financing, we issued convertible promissory notes to 15 accredited investors for an aggregate principal amount of $8.7 million. The convertible promissory notes accrued interest at a rate of 8% per annum and had a maturity date of December 31, 2012. In March 2013, these notes converted

into 76,489 shares of our Series B convertible preferred stock and 760,390 shares of our Series B-1 convertible preferred stock.

(10) Between December 2011 and June 2012, in connection with a bridge loan financing, we granted warrants to purchase shares of our common stock to 15 accredited investors at an exercise price of $30.75 per share for an aggregate purchase price of $8,711. In March 2013, these warrants were canceled pursuant to the warrant cancellation agreement.

(11) In October 2012, in connection with a bridge loan financing, we issued convertible promissory notes to 12 accredited investors for an aggregate principal amount of $750,000. The convertible promissory notes accrued interest at a rate of 8% per annum and had a maturity date of October 9, 2013. In March 2013, these notes converted into 6,920 shares of our Series B convertible preferred stock and 62,288 shares of our Series B-1 convertible preferred stock.

(12) Between November 2012 and January 2013, in connection with a bridge loan financing, we issued convertible promissory notes to 12 accredited investors for an aggregate principal amount of $2.2 million. The convertible promissory notes accrued interest at a rate of 8% per annum and had maturity dates ranging from November 19, 2013 to January 18, 2014. In March 2013, these notes converted into 196,306 shares of our Series B-1 convertible preferred stock.

(13) In February 2013, in connection with a bridge loan financing, we issued convertible promissory notes to 12 accredited investors for an aggregate principal amount of $45,000. The convertible promissory notes accrued interest at a rate of 8% per annum and had a maturity date of February 20, 2014. In March 2013, these notes converted into 4,034 shares of our Series B-1 convertible preferred stock.

(14) In March 2013, convertible promissory notes we issued in August 2010 converted into 64,743 shares of our Series B convertible preferred stock and 582,686 shares of our Series B-1 convertible preferred stock.

Grants of Stock Options

(15) Between August 28, 2011 and August 28, 2014, we have granted stock options to purchase an aggregate of 951,984 shares of our common stock with exercise prices ranging from $0.00123 to $38.13 per share, to our employees, consultants and directors pursuant to our 2007 Plan.

Securities Act Exemptions

We deemed the offers, sales and issuances of the securities described in paragraphs (1) through (14) above to be exempt from registration under the Securities Act, in reliance on Section 4(2) of the Securities Act, including Regulation D and Rules 504 and 506 promulgated thereunder, relative to transactions by an issuer not involving a public offering. All purchasers of securities in transactions exempt from registration pursuant to Regulation D represented to us that they were accredited investors and were acquiring the shares for investment purposes only and not with a view to, or for sale in connection with, any distribution thereof and that they could bear the risks of the investment and could hold the securities for an indefinite period of time. The purchasers received written disclosures that the securities had not been registered under the Securities Act and that any resale must be made pursuant to a registration statement or an available exemption from such registration.

We deemed the grants of stock options described in paragraph (15) above, except to the extent described above as exempt pursuant to Section 4(2) of the Securities Act, to be exempt

from registration under the Securities Act in reliance on Rule 701 of the Securities Act as offers and sales of securities under compensatory benefit plans and contracts relating to compensation in compliance with Rule 701. Each of the recipients of securities in any transaction exempt from registration either received or had adequate access, through employment, business or other relationships, to information about us.

All of the foregoing securities are deemed restricted securities for purposes of the Securities Act. The certificates representing the securities issued in the transactions described in this Item 15 included appropriate legends setting forth that the securities had not been offered or sold pursuant to a registration statement and describing the applicable restrictions on transfer of the securities. There were no underwriters employed in connection with any of the transactions set forth in this Item 15.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits

See the Index to Exhibits attached to this registration statement, which is incorporated by reference herein.

(b) Financial Statement Schedules

No financial statement schedules are provided, because the information called for is not required or is shown either in the financial statements or the notes thereto.

Item 17. Undertakings.

Insofar as indemnification for liabilities arising under the Securities Act 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 Securities 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, 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 Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

(1) The registrant will provide to the underwriters at the closing as specified in the underwriting agreement, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

(2) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in the 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.

(3) For the purpose of determining any liability under the Securities Act, 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 amendment to the registration statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Waltham, in the Commonwealth of Massachusetts, on this 28th day of August, 2014.

SYNDAX PHARMACEUTICALS, INC.

By: /s/ Arlene M. Morris
Arlene M. Morris
President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, as amended, this amendment to the registration statement has been signed by the following persons on behalf of the registrant and in the capacities and on the dates indicated:

Signature	Title	Date
/s/ Arlene M. Morris **Arlene M. Morris**	President, Chief Executive Officer and Director (Principal Executive Officer)	August 28, 2014
/s/ John S. Pallies **John S. Pallies**	Chief Financial Officer and Treasurer (Principal Financial and Accounting Officer)	August 28, 2014
* **Dennis G. Podlesak**	Chairman of the Board	August 28, 2014
* **Fabrice Egros, Ph.D.**	Director	August 28, 2014
* **Luke Evnin, Ph.D.**	Director	August 28, 2014
* **Kim P. Kamdar, Ph.D.**	Director	August 28, 2014
* **Ivor Royston, M.D.**	Director	August 28, 2014
* **Richard P. Shea**	Director	August 28, 2014
* **George W. Sledge Jr., M.D.**	Director	August 28, 2014

* By: /s/ John S. Pallies
John S. Pallies
Attorney-in-Fact

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INDEX TO EXHIBITS

Exhibit Number	Exhibit Description
1.1#	Form of Underwriting Agreement.
3.1#	Ninth Amended and Restated Certificate of Incorporation, as currently in effect.
3.2#	Bylaws, as currently in effect.
3.3#	Amended and Restated Certificate of Incorporation to be in effect immediately prior to the completion of this offering.
3.4#	Amended and Restated Bylaws to be in effect immediately prior to the completion of this offering.
4.1#	Specimen Common Stock Certificate.
4.2#	Form of Warrant to purchase Common Stock issued pursuant to the Warrant Agreement by and between the company and Bayer Schering Pharma AG, dated as of March 26, 2007.
5.1#	Opinion of Hogan Lovells US LLP.
10.1#	Amended and Restated Investors' Rights Agreement by and among the company and the parties thereto, dated as of March 8, 2013.
10.2#	Warrant Agreement by and between the company and Bayer Schering Pharma AG, dated as of March 26, 2007.
10.3+#	2007 Stock Plan.
10.4+#	2007 Stock Plan Amendment, dated as of March 8, 2013.
10.5+#	2007 Stock Plan Amendment, dated as of July 10, 2013.
10.6+#	2007 Stock Plan Amendment, dated as of January 23, 2014.
10.7+#	Form of Incentive Stock Option Agreement under 2007 Stock Plan.
10.8+#	Form of Non-Statutory Stock Option Agreement under 2007 Stock Plan.
10.9+#	2013 Omnibus Incentive Plan.
10.10+#	Form of Incentive Stock Option Agreement under 2013 Omnibus Incentive Plan.
10.11+#	Form of Non-Qualified Option Agreement under 2013 Omnibus Incentive Plan.
10.12+#	2013 Employee Stock Purchase Plan.
10.13+#	Executive Employment Agreement by and between the company and Arlene Morris, dated as of December 5, 2013.
10.14+#	Executive Employment Agreement by and between the company and Robert S. Goodenow, dated as of December 5, 2013.
10.15+#	Executive Employment Agreement by and between the company and John Pallies, dated as of December 5, 2013.
10.16+#	Form of Indemnification Agreement by and between the company and each of its directors and officers.
10.17†#	License, Development and Commercialization Agreement by and between the company and Bayer Schering Pharma AG, dated as of March 26, 2007.

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Exhibit Number	Exhibit Description
10.18†#	First Amendment to the License, Development and Commercialization Agreement by and between the company and Bayer Pharma AG, dated as of October 13, 2012.
10.19#	Second Amendment to the License, Development and Commercialization Agreement by and between the company and Bayer Pharma AG, dated as of February 1, 2013.
10.20†#	Third Amendment to the License, Development and Commercialization Agreement by and between the company and Bayer Pharma AG, dated as of October 9, 2013.
10.21†#	Exclusive License Agreement by and between the company and the Regents of the University of Colorado, dated as of March 28, 2013.
10.22#	Loan and Security Agreement by and among the company, General Electric Capital Corporation and the other parties named therein, dated as of March 30, 2011.
10.23#	Consent and Amendment Agreement by and among the company, General Electric Capital Corporation and the other parties named therein, dated as of December 20, 2011.
10.24#	Consent and Amendment Agreement by and among the company, General Electric Capital Corporation and the other parties named therein, dated as of June 28, 2012.
10.25#	Consent and Amendment Agreement by and among the company, General Electric Capital Corporation and the other parties named therein, dated as of October 9, 2012.
10.26#	Consent and Amendment Agreement by and among the company, General Electric Capital Corporation and the other parties named therein, dated as of November 19, 2012.
10.27#	Consent and Amendment Agreement by and among the company, General Electric Capital Corporation and the other parties named therein, dated as of December 28, 2012.
10.28#	Consent and Amendment Agreement by and among the company, General Electric Capital Corporation and the other parties named therein, dated as of January 18, 2013.
10.29#	Consent and Amendment Agreement by and among the company, General Electric Capital Corporation and the other parties named therein, dated as of February 20, 2013.
10.30#	Consent and Amendment Agreement by and among the company, General Electric Capital Corporation and the other parties named therein, dated as of March 1, 2013.
10.31#	Consent and Amendment Agreement by and among the company, General Electric Capital Corporation and the other parties named therein, dated as of March 8, 2013.
10.32†#	Clinical Trial Agreement by and between Eastern Cooperative Oncology Group and the company, dated as of March 14, 2014.
10.33#	Loan and Security Agreement among the company, Solar Capital Ltd. and the Lenders listed therein, dated as of June 13, 2014.
21.1#	Subsidiaries of the company.
23.1	Consent of Independent Registered Accounting Firm.
23.2#	Consent of Hogan Lovells US LLP (included in Exhibit 5.1).
24.1#	Power of Attorney (included on the signature page to this registration statement).

Previously filed.
+ Indicates a management contract or compensatory plan.
† Registrant has requested confidential treatment for certain portions of this exhibit. This exhibit omits the information subject to this confidentiality request. Omitted portions have been filed separately with the Securities and Exchange Commission.

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the use in this Amendment No. 4 to Registration Statement No. 333-194845 of our report dated February 28, 2014 (June 4, 2014 as to the effects of the reverse stock split described in Note 18), relating to the consolidated financial statements of Syndax Pharmaceuticals, Inc. and subsidiary (which report expresses an unqualified opinion and includes an explanatory paragraph relating to the Company's ability to continue as a going concern) appearing in the Prospectus, which is part of such Registration Statement, and to the reference to us under the heading "Experts" in such Prospectus.

/s/ Deloitte & Touche LLP

Boston, Massachusetts
August 28, 2014