PORTOLA 2014

THE ART OF SCIENCE FOR THE BENEFIT OF PATIENTS

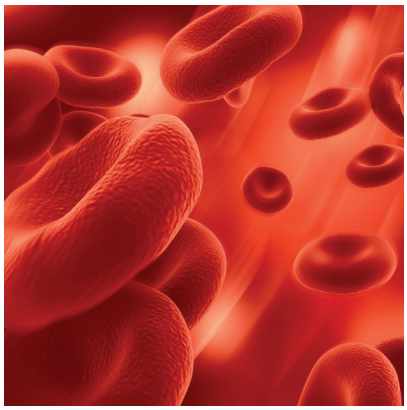
Art by C. Michael Gibson, MS, MD

CREATING INNOVATION. BREAKTHROUGH MEDICINES. VALUE.

CREATING A GROWTH COMPANY — 100+ STRONG

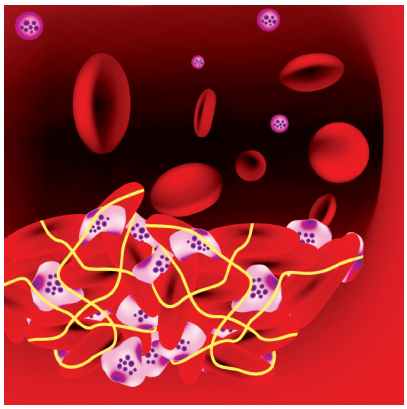
Portola Pharmaceuticals is a biopharmaceutical company developing unique medicines that could significantly advance the fields of thrombosis and hematologic cancers. Since our founding in 2003, we have made substantial progress toward our goal of bringing to the market multiple groundbreaking products that benefit patients.

Our science-driven team is dedicated to advancing our programs through the use of biomarker and genetic approaches to define novel clinical endpoints and to identify patients most likely to benefit from our therapies. We believe this approach increases the probability of success of our programs. Now over 100 employees strong, we are preparing for the potential commercialization of our products that we are developing to address serious unmet patient needs. Our objective remains to build a significant growth company through our commitment to excellence in science and discovery.



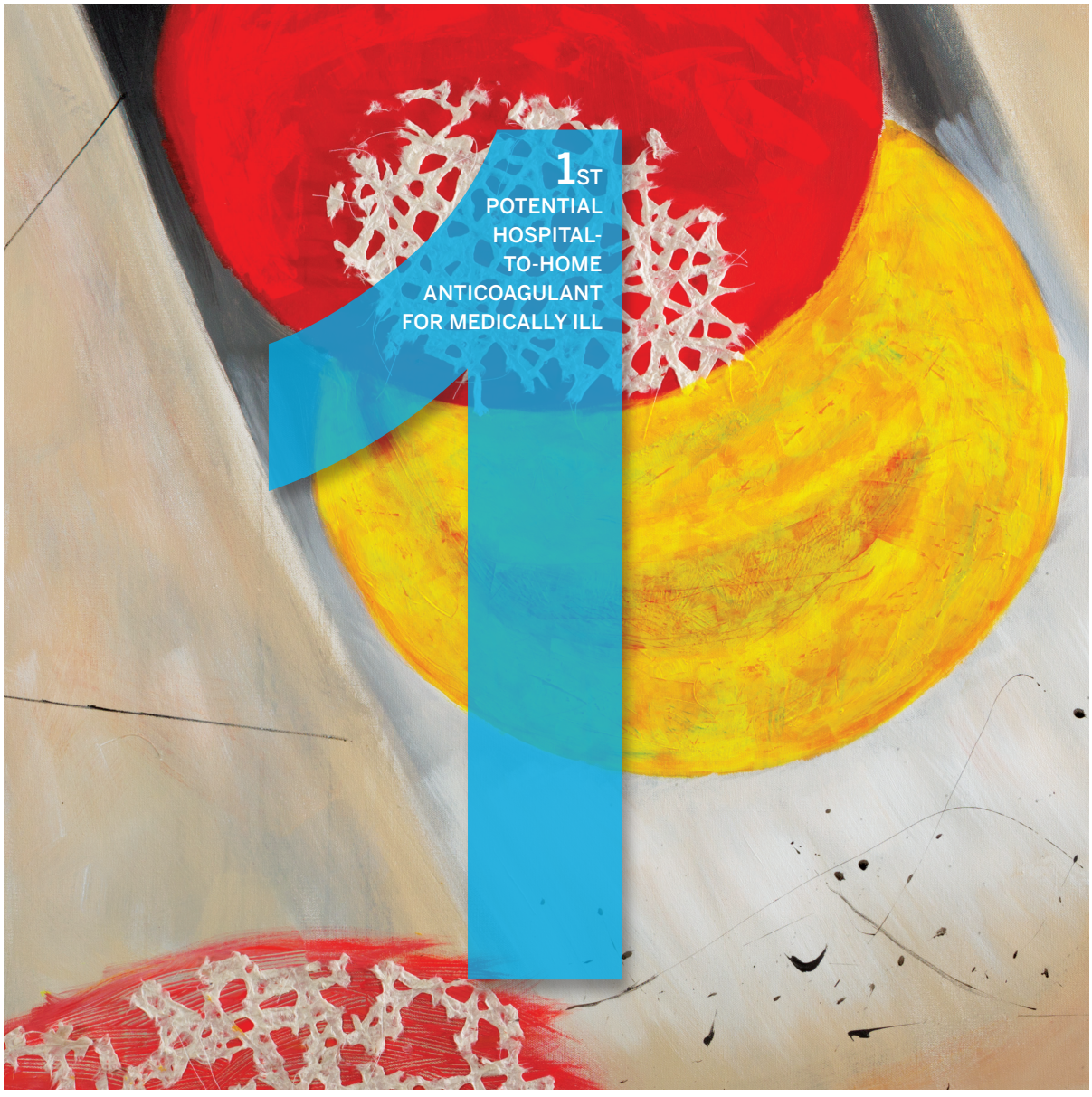
CREATING BREAKTHROUGHS — Andexanet Alfa

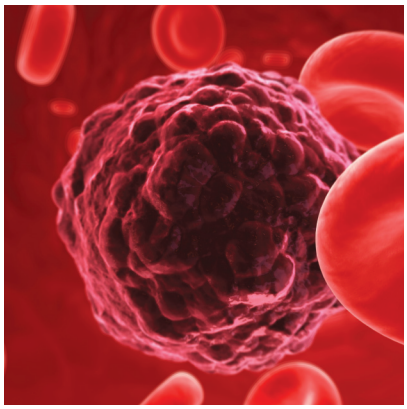
Andexanet alfa, an FDA-designated breakthrough therapy, is designed to rapidly and precisely reverse the anticoagulant effect of oral and injectable Factor Xa inhibitor anticoagulants to address their side effect of bleeding. Andexanet alfa has the potential to become the first universal antidote for anticoagulated patients who suffer a major bleeding episode or require emergency surgery. In multiple clinical studies with four different Factor Xa inhibitors, andexanet alfa significantly reversed the anticoagulant activity of these agents and was shown to be well tolerated. Andexanet alfa has been granted an Accelerated Approval pathway by the FDA, and our goal is to quickly bring this therapy to the market for the hundreds of thousands of patients annually who may benefit from an antidote to their anticoagulant.



CREATING FIRSTS — Betrixaban

Betrixaban is an oral, once-daily Factor Xa inhibitor anticoagulant. It has the potential to be the first and only anticoagulant approved for extended prevention of venous thromboembolism (blood clots), or VTE, in acute medically ill patients. These patients are hospitalized for conditions such as heart failure, stroke, infection, rheumatic disorders and pulmonary disease and are at high risk for developing blood clots. We believe betrixaban has the potential to succeed due to its validated mechanism of action, its properties that differentiate it from other oral anticoagulants, and our innovative biomarker-based pivotal study. If approved, betrixaban has the potential to change the treatment paradigm for the over 22 million acute medically ill patients who are hospitalized each year.





CREATING NOVEL MEDICINES — Cerdulatinib

Cerdulatinib is an oral, dual Syk/JAK kinase inhibitor that we are developing to treat patients with hematologic cancers, specifically those who have shown limited or no response to other therapies. In a single pill, cerdulatinib uniquely inhibits two key signaling pathways known to promote cancer cell growth. With its dual pathway mechanism, cerdulatinib may be more effective in certain patients than a single pathway agent. We have demonstrated proof-of-concept showing that cerdulatinib is active and well tolerated. With these initial promising results, we are advancing this agent into clinical expansion cohorts in patients with chronic lymphocytic leukemia and non-Hodgkin lymphoma.

CREATING INNOVATION

We are pioneering the development of new medicines for blood clots, blood cancers and other hematologic disorders. With **BETRIXABAN**, we are aiming to change the treatment paradigm in the acute medically ill patient population and reduce the occurrence of potentially fatal blood clots in these patients. With **ANDEXANET ALFA**, our goal is to address the significant need for a universal antidote for patients on Factor Xa inhibitors experiencing a major bleed or requiring emergency surgery. With **CERDULATINIB**, we have an agent that uniquely targets both Syk and JAK tumor survival pathways, which may result in greater clinical benefit in patients with hematologic cancers than that seen with single pathway agents.

IN PURSUIT OF LIFE-SAVING MEDICINES

2014 marked another year of extraordinary achievement for Portola. We continue to build on our success as a leader in the discovery and development of breakthrough medicines in the fields of thrombosis and blood cancers. Throughout the year, we reported positive clinical data and the achievement of regulatory milestones for each of our wholly-owned and potentially ground-breaking products.

We are now in the final stages of development with the goal of bringing two life-saving thrombosis medicines to market, our first in 2016 and our second in 2017. In addition, we continue to advance a third clinical-stage product – a drug with a unique mechanism of action that is intended to treat blood cancer patients who do not respond to current therapies.

We are building a significant growth company with a culture grounded in science and a focus on advancing our late-stage pipeline. We are deeply committed to bringing to the market medicines with the potential to save lives and deliver stockholder value.

PARADIGM-CHANGING NOVEL ANTICOAGULANT

Betrixaban, our once-daily oral Factor Xa inhibitor, has the potential to be the first product in its class to be approved for use in acute medically ill patients and the first anticoagulant approved for extended duration prevention of venous thromboembolism (VTE), or blood clots, in these patients.

Acute medically ill patients are those who are hospitalized for serious non-surgical conditions, such as stroke, heart failure, serious infection, rheumatic and pulmonary disorders.

Each year, over 22 million acute medically ill patients are hospitalized in the G7 countries with an indication for an anticoagulant to prevent VTE. Despite standard hospital-based therapies, such as injectable enoxaparin, an estimated 1 million of these patients will suffer a serious VTE and over 150,000 will die from a fatal VTE every year. Data have shown that more than 50 percent of life-threatening blood clots occur following hospital discharge and after the standard 10 days of therapy – a period for which there is no approved therapy.

We believe that betrixaban has the potential to change the treatment paradigm by addressing the limitations of injectable hospital-based therapies and by being the first anticoagulant

BETRIXABAN NEED

1 MILLION WILL SUFFER POTENTIALLY FATAL BLOOD CLOT

approved for extended duration VTE prevention in these patients following hospital discharge.

We expect to complete enrollment in our global pivotal Phase 3 APEX (Acute Medically Ill VTE Prevention with Extended Duration Betrixaban) Study in 2015 and submit an NDA for this product in 2016. The APEX study has an advantage of using a biomarker (D-dimer) to identify patients who are at risk of VTE and are most likely to benefit from betrixaban. Recently, a pre-specified futility analysis of the APEX study was successfully completed, and we continue to observe that the blinded aggregate VTE event rates in the study to date are on track. Therefore, we are optimistic about betrixaban's potential to achieve commercial approval for VTE prevention in this patient population.

ANDEXANET ALFA

BREAKTHROUGH THERAPY WITH UNPRECEDENTED CLINICAL RESULTS

ADDRESSING AN URGENT UNMET NEED

An additional promising compound in our thrombosis franchise is andexanet alfa, which has been designated by the U.S. Food and Drug Administration (FDA) as both a breakthrough therapy and an orphan drug. In 2014, we made significant progress on this program and expect to bring it to market in 2016 as our first commercially approved product. Andexanet has the potential to be the first antidote approved to reverse the anticoagulation activity in Factor Xa inhibitor treated patients who suffer a major bleeding episode or who may require emergency surgery. The morbidity and mortality associated with bleeding on Factor Xa inhibitors remains unaddressed. With the expected increase in adoption of Factor Xa inhibitors, we project that by the year 2020 over 500,000 patients annually in the United States, Japan and the five largest EU countries may benefit from an antidote.

We are evaluating andexanet alfa in two randomized, placebo-controlled Phase 3 ANNEXA™ (Andexanet Alfa a Novel Antidote to the Anticoagulant Effects of FXa Inhibitors) registration studies. Initial results from these studies have demonstrated that andexanet alfa rapidly and significantly reversed apixaban and rivaroxaban and was well tolerated. Andexanet alfa is the only Factor Xa inhibitor antidote in development that has been shown to reverse definitive markers of anticoagulant activity, such as anti-Factor Xa levels, in clinical studies.

In 2014 we also initiated ANNEXA-4, a Phase 4 single-arm confirmatory study in bleeding patients receiving apixaban, rivaroxaban, edoxaban or enoxaparin who present with an acute major bleed.

Our goal is to bring this much-needed therapy to patients as quickly as possible under an FDA Accelerated Approval pathway.

DEVELOPING A UNIQUE DUAL PATHWAY ONCOLOGY AGENT

Our third clinical-stage product, cerdulatinib, is an oral kinase inhibitor with a unique mechanism of action – it targets both Syk and JAK tumor survival pathways. The inhibition of Syk has been shown to directly impact a tumor's internal survival signaling pathway, while the inhibition of JAK can block supportive survival signals a tumor receives from its micro-environment. With its dual pathway mechanism, cerdulatinib may be more effective in specific patients – such as those resistant to current therapies or those with known heterogeneous cellular mutations – than a single pathway agent.

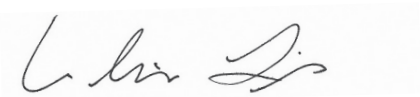
This past year, we reported preliminary data from our ongoing Phase 1/2a study demonstrating clinical responses with cerdulatinib. Based on these data, we are advancing the program to study larger expansion cohorts in patients with chronic lymphocytic leukemia, follicular lymphoma and other hematologic cancers, including those whose cancer has progressed following treatment with multiple agents. Our goal is to pursue patient populations with significant unmet need in whom the inhibition of both Syk and JAK by cerdulatinib may provide clinical benefit. If cerdulatinib is successful in the next stage of development, we will seek an accelerated development path.

BUILDING A SIGNIFICANT GROWTH COMPANY FOR THE BENEFIT OF PATIENTS

We are leading the way in developing novel medicines for patients with life-threatening thrombotic conditions and hematologic cancers. Our growth is built on a foundation of exceptional science and extensive experience in discovering, developing and commercializing successful medicines. Our drive is born out of a commitment to help patients who have limited to no treatment options.

I would like to recognize and thank our patients, employees and academic collaborators. They have inspired the innovative science being advanced at Portola and our success to date. Importantly, I also want to thank our stockholders for their continued support. We look forward to keeping you apprised of our progress during the exciting year ahead.

Sincerely,



WILLIAM LIS
Chief Executive Officer
April 2, 2015

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the Fiscal Year Ended December 31, 2014

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission File Number: 001-35935

PORTOLA PHARMACEUTICALS, INC.
(Exact name of registrant as specified in its charter)

Delaware	**2834**	**20-0216859**
(State or other jurisdiction of incorporation or organization)	(Primary Standard Industrial Classification Code Number)	(I.R.S. Employer Identification No.)

270 E. Grand Avenue
South San Francisco, California 94080
(Address of Principal Executive Offices) (Zip Code)

(650) 246-7000
(Registrant's Telephone Number, Including Area Code)

Securities registered pursuant to Section 12(b) of the Act:

Title of Each Class:	**Name of Each Exchange on which Registered**
Common Stock, par value $0.001 per share	The NASDAQ Global Select Market

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☒ No ☐

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

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 definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

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

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

The aggregate market value of the voting and non-voting common equity held by non-affiliates was $857.6 million computed by reference to the last sales price of $29.18 as reported by the NASDAQ Global Select Market, as of the last business day of the registrant's most recently completed second fiscal quarter, June 30, 2014. This calculation does not reflect a determination that certain persons are affiliates of the registrant for any other purpose.

As of February 27, 2015, the number of outstanding shares of the registrant's common stock, par value $0.001 per share, was 48,952,668.

DOCUMENTS INCORPORATED BY REFERENCE

Part III incorporates information by reference to the definitive proxy statement for the registrant's Annual Meeting of Stockholders to be held on or about June 16, 2015, to be filed within 120 days of the registrant's fiscal year ended December 31, 2014.

TABLE OF CONTENTS

Portola Pharmaceuticals, Inc.
Form 10-K
Index

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SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This report, including the sections titled "Business," "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations," contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. In some cases you can identify these statements by forward-looking words, such as "believe," "may," "will," "estimate," "continue," "anticipate," "intend," "could," "would," "project," "plan," "potential," "seek," "expect," "goal" or the negative or plural of these words or similar expressions. These forward-looking statements include, but are not limited to, statements concerning the following:

- our ability to enroll patients in our clinical studies at the pace that we project;
- our ability to scale up manufacturing of our product candidates to commercial scale;
- the timing and the success of the design of our Phase 3 clinical study of Betrixaban, or APEX;
- the timing and the success of our Phase 3 registration study and Phase 4 confirmatory study of Andexanet alfa;
- the timing and the success of our anticipated additional Phase 2 proof-of-concept studies of Andexanet alfa;
- potential indications for Andexanet alfa;
- our ability to submit a Biologics License Application, or BLA, for Andexanet alfa in the time frame we project;
- whether the results of our APEX study will be sufficient to support global regulatory approvals for Betrixaban;
- our ability to obtain and maintain regulatory approval of our product candidates;
- our ability to conduct a proof-of-concept study in hematologic cancers for Cerdulatinib;
- our expectation that our existing capital resources will be sufficient to enable us to complete our ongoing Phase 3 clinical study of Betrixaban, advance our Phase 4 Biologics License Application enabling studies and related manufacturing of Andexanet alfa and our Phase 1/2a proof-of-concept studies of Cerdulatinib in hematologic cancers;
- the projected number of acute medically ill patients who would benefit from the use of Betrixaban;
- the projected dollar amounts of future sales of established and novel anticoagulants;
- our ability to successfully commercialize our products;
- the rate and degree of market acceptance of our products;
- our ability to successfully build a hospital-based sales force and commercial infrastructure;
- our ability to compete with branded and generic Factor Xa inhibitors;
- our reliance on third parties to conduct our clinical studies;
- our reliance on third-party contract manufacturers to manufacture and supply our product candidates for us;
- our reliance on our collaboration partners' performance over which we do not have control;
- our ability to retain and recruit key personnel;
- our ability to obtain and maintain intellectual property protection for our products;
- the actual receipt and timing of any milestone payments or royalties from our collaborators;
- our estimates of our expenses, ongoing losses, future revenue, capital requirements and our needs for or ability to obtain additional financing;

- our ability to identify, develop, acquire and in-license new products and product candidates;
- our ability to successfully establish and successfully maintain appropriate collaborations and derive significant revenue from those collaborations;
- our financial performance; and
- developments and projections relating to our competitors or our industry.

These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in "Risk factors." Moreover, we operate in a very competitive and rapidly changing environment. New risks emerge from time to time. It is not possible for our management to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this report may not occur and actual results could differ materially and adversely from those anticipated or implied in the forward-looking statements.

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 that the future results, levels of activity, performance or events and circumstances reflected in the forward-looking statements will be achieved or occur. Moreover, except as required by law, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. We undertake no obligation to update publicly any forward-looking statements for any reason after the date of this report to conform these statements to actual results or to changes in our expectations.

You should read this report and the documents that we reference in this report and have filed with the Securities and Exchange Commission as exhibits to this report with the understanding that our actual future results, levels of activity, performance and events and circumstances may be materially different from what we expect.

PART I

ITEM 1. BUSINESS

Overview

We are a biopharmaceutical company focused on the development and commercialization of novel therapeutics in the areas of thrombosis, other hematologic disorders and inflammation for patients who currently have limited or no approved treatment options. We are advancing our three wholly-owned compounds using novel biomarker and genetic approaches that may increase the likelihood of clinical, regulatory and commercial success of our potentially life-saving therapies. Two of these compounds were discovered through our internal research efforts and one was discovered by Portola scientists during their time at a prior company.

Our two lead programs address significant unmet medical needs in the area of thrombosis, or blood clots. Our first lead compound Betrixaban is a novel oral once-daily inhibitor of Factor Xa in Phase 3 clinical trials for extended duration prophylaxis, or preventive treatment, of a form of thrombosis known as venous thromboembolism, or VTE, in acute medically ill patients for 35 days of in-hospital and post-discharge use. Currently, there is no anticoagulant approved for extended duration VTE prophylaxis in the acute medically ill population. Our second lead compound Andexanet alfa, an FDA-designated breakthrough therapy, is a recombinant protein designed to reverse anticoagulant activity in patients treated with a Factor Xa inhibitor. Andexanet alfa has potential indications to treat patients who are taking a direct or indirect Factor Xa inhibitor and who suffer a major bleeding episode or require emergency surgery. We are currently evaluating Andexanet alfa in Phase 3 clinical trials and a Phase 4 confirmatory trial. Our third product candidate, Cerdulatinib, is an orally available kinase inhibitor that inhibits spleen tyrosine kinase, or Syk, and janus kinases, or JAK, enzymes that regulate important signaling pathways. Cerdulatinib is being developed for hematologic, or blood, cancers and inflammatory disorders. We are currently conducting a Phase 1/2a proof-of-concept study for Cerdulatinib in patients with non-Hodgkin's lymphoma, or NHL, or chronic lymphocytic leukemia, or CLL, who have failed or relapsed on existing marketed therapies or products in development, including patients with identified mutations. In the Phase 1 dose escalation portion of the study, we have yet to reach the maximum tolerated dose and enrollment continues. Based on interim Phase 1 data, we are advancing Cerdulatinib to the Phase 2a portion of the study which includes expansion cohorts. We have another program of highly selective Syk inhibitors which is partnered with Biogen Idec Inc.

We have full worldwide commercial rights to Betrixaban, Andexanet alfa, and Cerdulatinib. We believe we can maximize the value of our company by retaining substantial commercialization rights to these three product candidates and, where appropriate, entering into partnerships to develop and commercialize these product candidates. We plan on building a successful enterprise to commercialize Betrixaban and Andexanet alfa, using a hospital-based sales team in the United States and possibly other major markets and with partners in other territories.

Betrixaban

Betrixaban is a novel oral once-daily inhibitor of Factor Xa in development for extended duration VTE prophylaxis in acute medically ill patients for 35 days of in-hospital and post-discharge use. Acute medically ill patients are those who are hospitalized for serious non-surgical conditions, such as heart failure, stroke, infection, rheumatic disorders and pulmonary disorders. We estimate that in the G7 countries in 2014 there were 22.5 million acute medically ill patients for whom VTE prophylaxis was recommended by medical treatment guidelines. The current standard of care for VTE prophylaxis in this population is enoxaparin, an injectable low molecular weight heparin that is approved for a usual administration period of 6 to 11 days and up to 14 days and is not approved for use outside of the hospital. According to IMS Health Incorporated, or IMS, a healthcare industry information provider, worldwide sales of enoxaparin for the twelve months through March 2014 were in excess of $4.1 billion. We believe that use of enoxaparin in acute medically ill patients accounted for at least $2.0 billion of these sales.

Multiple large, global trials have demonstrated that there is substantial risk of VTE in acute medically ill patients with restricted mobility and other risk factors beyond the standard course of enoxaparin. Our Phase 3 APEX study is designed to use biomarkers to identify and enroll patients most likely to benefit from therapy with Betrixaban. Specifically, these patients have elevated blood levels of D-dimer or are over age 75. There have been numerous publications highlighting the role of these two prognostic markers in identifying patients at extended risk of VTE. The MAGELLAN trial sponsored by Bayer Pharma AG, or Bayer, and Janssen Pharmaceuticals, Inc., or Janssen, which evaluated administration of rivaroxaban for an extended period, demonstrated that the incidence of VTE-related death rose four-fold over several weeks after hospital discharge and the discontinuation of treatment. However, there are no therapies approved for use beyond a typical hospitalization period of 6 to 14 days despite the ongoing risk of VTE faced by these patients for 35 days or more following hospital admission. We are developing Betrixaban to be the first oral Factor Xa inhibitor approved for use in acute medically ill patients and the first anticoagulant approved for hospital-to-home VTE prophylaxis in these patients. We believe the addressable market opportunity for Betrixaban could be $3.0 billion to $4.0 billion by 2020.

In 2012, we initiated our pivotal biomarker-based Phase 3 APEX study, a randomized, double-blind, active-controlled, multicenter, multinational study to evaluate a once-daily dose of Betrixaban for 35 days for superiority as compared to in-hospital administration of enoxaparin once daily for 6 to 14 days followed by placebo. Our APEX study is over 70% enrolled in 35 countries worldwide. We believe Betrixaban has the potential to succeed in this patient population, in part due to its validated mechanism of action, but most importantly, due to its properties that differentiate it from other anticoagulants. First, it has the longest half-life, making it a true, once-daily therapy allowing for a narrow peak-to-trough concentration ratio that helps maintain a less variable anticoagulant effect over the course of a day. Second, it has the lowest renal clearance of all of the Factor Xa inhibitors, which may result in a lower rate of bleeding. And finally, it is not metabolized in the liver by an enzyme called CYP 3A4, which may result in reduced potential for drug-on-drug interactions. These properties are critically important for acute medically ill patients who are often renally compromised and on multiple concomitant medications.

In February 2015, the Independent Data Monitoring Committee (IDMC) recommended that the Phase 3 APEX Study of Betrixaban continue as planned without modification based on the successful completion of a pre-specified futility analysis. In making this recommendation, the IDMC evaluated preliminary efficacy trends and safety reports from the first 50% of the patients enrolled.

In January 2013, we entered into a clinical collaboration agreement with Lee's Pharmaceutical (HK) Ltd, or Lee's, to jointly expand our Phase 3 APEX study of Betrixaban into China with an exclusive option for Lee's to negotiate for the exclusive commercial rights to Betrixaban in China.

Andexanet alfa

Andexanet alfa, an FDA-designated breakthrough therapy, is a recombinant protein designed to reverse the anticoagulant activity in patients treated with a Factor Xa inhibitor. Andexanet alfa has potential indications to treat patients who are taking a direct or indirect Factor Xa inhibitor and who suffer a major bleeding episode or require emergency surgery. Currently, there is no antidote or reversal agent approved for use against Factor Xa inhibitors. Leading clinicians have identified, and the United States Food and Drug Administration, or FDA, has recognized, the lack of an effective reversal agent for Factor Xa inhibitors as a significant unmet clinical need. Based on industry data, we estimate that in 2020, between 23 million and 36 million patients will be treated with Factor Xa inhibitors, including low molecular weight heparins, for short-term use or chronic conditions. Clinical trial results suggest that, depending on their underlying medical condition, annually between 1% and 4% of these patients may experience a major bleeding event and an additional 1% may require emergency surgery. We believe that Andexanet alfa, if approved, has the long-term potential to address a total worldwide market in excess of $2.0 billion.

Andexanet alfa is the first therapy to demonstrate reversal of the anticoagulant activity of Factor Xa inhibitors as measured by anti-Factor Xa levels. We have initiated two Phase 3 ANNEXA™ (Andexanet Alfa a Novel Antidote to the Anticoagulant Effects of fXA Inhibitors) studies – one with Bristol-Myers Squibb Company, or BMS, and Pfizer Inc.'s, or Pfizer's, Factor Xa inhibitor, apixaban and one with Bayer Pharma AG, or Bayer, and Janssen Pharmaceuticals, Inc., or Janssen's, Factor Xa inhibitor, rivaroxaban. Our Phase 3 studies each consist of two parts. In the first part of each study, the effect of a single bolus of Andexanet alfa was evaluated in healthy volunteers who had been given apixaban or rivaroxaban. In the second part of each study, the ability of Andexanet alfa to sustain reversal of the anticoagulant effects of apixaban and rivaroxaban will be evaluated by administering a bolus plus infusion of Andexanet alfa to healthy volunteers who have been given apixaban or rivaroxaban. The first part of our Phase 3 ANNEXA™ studies of a single bolus of Andexanet alfa with apixaban and with rivaroxaban both met their primary and secondary endpoints with high statistical significance (p-values of less than 0.0001). The second part of our Phase 3 ANNEXA™ studies is ongoing with results expected in the first half of 2015. In early 2015, we initiated a Phase 4 ANNEXA™ confirmatory patient study, as agreed to by the FDA and EMA as part of an accelerated approval pathway for Andexanet alfa. This open-label, single-arm study is being conducted in patients receiving apixaban, rivaroxaban or enoxaparin (a low molecular weight heparin) who present with an acute major bleed. Pursuant to discussions with the FDA, we plan to include data from a small number of patients from this study in our Biologics License Application, or BLA, which we expect to submit in 2015 for conditional approval.

We completed a series of Phase 2 proof-of-concept studies evaluating the safety and activity of Andexanet alfa in healthy volunteers who were administered one of several Factor Xa inhibitors. Analysis of anticoagulation markers in blood samples taken from the subjects in these studies demonstrated that Andexanet alfa produced immediate reversal of anticoagulant activity of the Factor Xa inhibitors apixaban, rivaroxaban and enoxaparin and that the reversal could be sustained. Additionally, we are conducting a Phase 2 proof-of-concept study evaluating the reversal of edoxaban and we plan to initiate a Phase 2 study evaluating the reversal of Betrixaban.

We have entered into collaboration agreements with BMS, and Pfizer collaboration agreements with Bayer, and Janssen, and agreements with Daiichi Sankyo, Inc., or Daiichi Sankyo, to support Phase 2 and Phase 3 clinical studies with apixaban, rivaroxaban and edoxaban, respectively. Collectively, these clinical collaborations represent over $100 million in upfront, contingent and potential milestone payments to Portola. We retain full commercial rights with respect to Andexanet alfa.

Cerdulatinib

Cerdulatinib is an orally available, potent dual spleen tyrosine kinase (Syk) and janus kinase (JAK) inhibitor. Scientists have demonstrated that both Syk and JAK play key roles in various hematologic cancers and inflammatory diseases. We are developing Cerdulatinib for treatment of certain B-cell hematologic cancers, with a particular focus on patients who have NFkB activating mutations or acquired mutations to other novel B-cell targeted therapies that cause treatment failure or disease relapse. Cerdulatinib has completed preclinical testing and has demonstrated in-vitro activity in cancer cell lines with NFkB activating mutations and in patient tumor samples with acquired mutations to novel B-cell targeted drug candidates. In October 2013, we initiated a Phase 1/2a proof-of-concept study in NHL, and CLL, patients. In the Phase 1 dose escalation portion of the study, we have yet to reach the maximum tolerated dose and enrollment continues. We presented interim Phase 1 data at the American Society of Hematology Meeting in December 2014, and as a result we are advancing Cerdulatinib into the Phase 2a portion of the study which includes expansion cohorts at the recommended Phase 2 dose.

Syk-selective inhibitors

We have a program of highly selective Syk inhibitors which is partnered with Biogen Idec Inc. Biogen Idec is leading the pre-clinical study of highly selective Syk inhibitors for allergic asthma and other inflammatory disorders and is responsible for all development-related expenses. Syk plays a critical role in mast-cell signaling and activation, which are central to immune system over-activation and resultant airway constrictions in asthma. It is estimated that allergic asthma affects 15 million people in the United States alone. Despite numerous approved treatments, approximately 25% of all emergency room visits each year are attributed to acute and severe episodes of this disease.

Our strategy

Our goal is to build an enduring biopharmaceutical company with a foundation of products and product candidates that significantly advance patient care in the areas of thrombosis, other hematologic disorders and inflammation. We have a clear strategy focused on biomarker or genetic approaches to clinical development that we believe will increase the probability of clinical, regulatory and commercial success of our first-in-class therapies. Key elements of our strategy are as follows:

Successfully complete the clinical development of Betrixaban. We expect to complete enrollment in our global pivotal Phase 3 clinical study, APEX by the end of 2015. APEX, is evaluating the efficacy and safety of our lead product candidate Betrixaban for extended duration VTE prophylaxis during a hospital stay as well as post-discharge for 35 days in acute medically ill patients with restricted mobility and other risk factors. In February 2015, the Independent Data Monitoring Committee, or IDMC, recommended that our Phase 3 APEX Study of Betrixaban continue as planned without modification based on the successful completion of a pre-specified futility analysis. In making this recommendation, the IDMC evaluated preliminary efficacy trends and safety reports from the first 50% of the patients enrolled. If APEX is successful and we receive regulatory approval, Betrixaban will be the first anticoagulant approved based on a biomarker approach for the multi-billion dollar market for extended VTE prophylaxis in acute medically ill patients, both in the hospital and after discharge.

Advance Andexanet alfa through an expedited development and approval process. We are pursuing an Accelerated Approval pathway for our FDA-designated breakthrough therapy, Andexanet alfa. Based on clinical trial results and discussions with the FDA, we believe that the FDA supports our pursuit of this approval pathway. Based on our Phase 3 ANNEXA clinical studies in healthy volunteers, we plan to submit a BLA for conditional approval at the end of 2015, which will include a small amount of patient data from our Phase 4 ANNEXA-4 confirmatory study, which was initiated in early 2015. Additionally, we are in the process of obtaining formal scientific advice from the EMA regarding the process for approval in Europe and plan to submit a Marketing Authorization Application, or MAA, to the EMEA under the same Accelerated Approval pathway following our FDA filing.

Commercialize Betrixaban and Andexanet alfa, if approved, in the United States using a hospital-focused sales force. We plan to commercialize both of our thrombosis product candidates with a U.S. hospital-based sales force of approximately 100 to 140 sales representatives. We believe we will be able to address the multi-billion dollar markets for our thrombosis products with a targeted sales and marketing effort because hospitals represent a concentrated customer base as compared to primary care or specialty physicians. Outside the U.S., we are evaluating our commercial strategy.

Advance Cerdulatinib for treatment of hematologic cancers. We are currently evaluating Cerdulatinib in a Phase 1/2a proof-of-concept study in NHL and CLL. In the Phase 1 dose escalation portion of the study, we have yet to reach the maximum tolerated dose and enrollment continues. Based on interim Phase 1 data, we are advancing Cerdulatinib into the Phase 2a portion of the study which includes expansion cohorts at the recommended Phase 2 dose. Cerdulatinib targets two key signaling pathways that can promote cancer cell growth. This product candidate has the potential for broad activity in hematologic cancers because it blocks the B-cell receptor pathway via Syk and key cytokine receptors via JAK. Our strategy for Cerdulatinib is to focus on patients that have shown limited response to other therapies or have relapsed or do not respond due to mutations.

Deploy capital strategically to develop our portfolio of product candidates and create value. We expect to continue to deploy most of our capital resources to develop Betrixaban and Andexanet alfa and to a lesser extent, advance Cerdulatinib into clinical expansion cohorts. It is our strategy to leverage established clinical trial design principles as well as proactive engagement with relevant regulatory authorities to advance these candidates towards key value inflection points in a capital-efficient manner. In parallel with these efforts, we have entered into and anticipate that we will continue to seek and evaluate partnerships that provide support for the further development of our product candidates while retaining significant economic and commercial rights. We believe that this combination of independent development and partnering activity may allow us to realize the substantial potential value of our product candidates while reducing our capital requirements.

Product candidates

Our development pipeline, summarized in the table below, includes three wholly owned compounds and one partnered program.

Development pipeline				
Product	**Description**	**Stage**	**Indication**	**Worldwide commercial rights**
Betrixaban	Oral Factor Xa inhibitor	Phase 3	Extended duration VTE prophylaxis in acute medically ill patients in-hospital and post discharge for 35 days	Portola
Andexanet alfa	Antidote for Factor Xa inhibitors	Phase 3 and Phase 4	Reversal of Factor Xa inhibitor anticoagulation	Portola
Cerdulatinib	Oral Dual Syk and JAK inhibitor	Phase 1/2a	B-cell hematologic cancers	Portola
Syk-selective inhibitors	Syk inhibitor	Pre-clinical	Allergic asthma and other inflammatory disorders	Biogen Idec

Betrixaban

We are developing Betrixaban to be the first anticoagulant approved for extended duration VTE prophylaxis in acute medically ill patients both in-hospital and after discharge for 35 days. Acute medically ill patients are patients hospitalized for non-surgical conditions, such as heart failure, stroke, infection, rheumatic disorders and pulmonary disorders. Acute medically ill patients with restricted mobility and other risk factors are known to be at increased risk for VTE, both in the hospital and after discharge. Each year, more than 150,000 acute medically ill patients worldwide die of VTE and not from their underlying medical condition. Pulmonary embolism is the most common preventable cause of hospital death and a leading cause of increased length of hospital stay. The average annual direct medical cost of treating VTE in a hospital setting in the United States is between $7,500 and $16,500 per patient and is even greater for elderly, higher risk patients. Both the National Quality Forum and the Joint Commission on Accreditation of Healthcare Organizations include the utilization of VTE prevention measures as a leading indicator of quality of patient care.

While there are a number of anticoagulants approved for short-duration VTE prophylaxis in acute medically ill patients during the typical hospitalization period, there is no anticoagulant approved for extended duration VTE prophylaxis in this population. Acute medically ill patients at risk for VTE are typically treated with intravenous or injectable heparin or an injectable low molecular weight heparin, such as enoxaparin, marketed as Lovenox® and also available in generic form, while in the hospital but not after discharge. Multiple large regional and global studies have demonstrated that there is a substantial risk of VTE after hospital discharge in acute medically ill patients with restricted mobility and other risk factors. For example, the MAGELLAN trial of 8,101 patients showed that the rate of VTE-related death for the 10-day period while the patients were in the hospital receiving anticoagulation therapy was 0.2%, while the rate of VTE-related death for the 25-day post-discharge period when the patient did not receive anticoagulation treatment, was 0.8%, a four-fold increase. One academic study examined the medical records of approximately 11,000 acute medically ill patients for a period of 180 days after hospital admission and determined that 56.6% of VTE events in this population occurred after discharge. These studies highlight the need for more effective extended duration prophylaxis therapies.

We are developing Betrixaban to be the first oral Factor Xa inhibitor approved for use in acute medically ill patients and the first anticoagulant approved for extended duration VTE prophylaxis in those patients. We are evaluating Betrixaban in APEX, a global Phase 3 clinical study using a biomarker approach by focusing on patients that are most likely to benefit, specifically those with elevated D-dimer blood levels or those over the age of 75. In the field of thrombosis, it is well established that the outcomes of Phase 3 trials are significantly influenced by three factors: drug properties, dose selection and selection of the patients who will benefit most from treatment. Historically, multiple anticoagulant drugs have effectively addressed these factors in their clinical trials and have had success where competing agents within the same class have not. Applying our knowledge of Betrixaban's properties, our clinical experience with Betrixaban and learnings from Factor Xa inhibitor clinical trials conducted by other companies, we believe we have designed the APEX study to enhance the likelihood of its success, despite the lack of success of other Factor Xa inhibitors in this indication, based on the following factors:

Drug properties. Betrixaban's unique pharmacodynamic and pharmacokinetic properties compared to other oral Factor Xa inhibitors include a long half-life suitable for once-daily dosing, low renal clearance, which reduces the risk of drug accumulation, and low drug-drug interaction potential due to lack of metabolism by the CYP3A4 pathway, a key metabolic route for many other drugs.

Dosing. The dosing regimen in our APEX study is designed to provide immediate anticoagulation for patients in the hospital and to maintain a therapeutic level of anticoagulation over 24 hours with each oral once-daily dose for 35 days to reduce variability and potential for increased bleeding risk from supratherapeutic drug levels or increased VTE risk from subtherapeutic drug levels. We chose the dosing regimen of Betrixaban administered in APEX based on extensive modeling from our preclinical and clinical experience with Betrixaban and analysis of efficacy, safety and pharmacokinetic data from clinical trials of other Factor Xa inhibitors.

Patient population. The APEX patient population, which is based on extensive review of epidemiologic studies and data from multiple large trials in acute medically ill patients, targets the specific patients with certain risk factors who are at an increased risk for VTE and can potentially benefit from extended duration VTE prophylaxis both during a hospital stay and post-discharge for 35 days, while excluding those at increased risk of bleeding, the main side effect of all anticoagulants.

Overview of thrombosis

Thrombosis is the leading cause of mortality and morbidity in the western world. Thrombosis arises from an abnormal or excessive activation of the body's natural clotting process, resulting in the formation of a clot inside a blood vessel that disrupts normal blood flow. If the clot detaches from the blood vessel wall and travels through the body, known as thromboembolism, it can damage vital organs, such as the brain, heart and lungs. Clots that block arteries can lead to myocardial infarctions, more commonly referred to as heart attacks, or a form of stroke known as ischemic strokes. Our Betrixaban development efforts are currently focused on VTE, with the two most common conditions being deep vein thrombosis, or DVT, which typically leads to pain and swelling in the leg, and pulmonary embolism, which occurs when a clot disrupts blood flow to the lungs, leading to lung damage or even death. In the United States, on an annual basis, 1.2 million people have a new or recurrent heart attack, 700,000 people suffer an ischemic stroke and 350,000 to 600,000 people have a VTE.

Thrombosis is generally prevented or treated using either anticoagulants, commonly known as blood thinners, or another class of drugs known as antiplatelet agents. The specific drug, dose and dosing frequency and duration of treatment depends on a patient's underlying disease and treatment setting, such as during surgery, in the hospital or at home. In some cases, these agents may be used in sequence or combination.

Prophylaxis against all forms of thrombosis is a major medical need throughout the developed world. For example, in the G7 countries, the United States, Japan, France, Germany, Italy, Spain and the United Kingdom, existing medical guidelines recommend that a population of approximately 46.4 million patients receive some form of anticoagulation drug therapy to reduce their risk of thrombosis. The largest category of patients at risk for thrombosis is the acute medically ill, whose risk is increased for those patients immobilized for more than a few days or with other risk factors. In addition to acute medically ill patients, populations at risk for thrombosis include patients with atrial fibrillation, acute coronary syndrome, recent VTE and certain genetic mutations, as well as surgical patients undergoing orthopedic or abdominal procedures.

The table below shows our estimate of the number of patients in the G7 countries, categorized by medical condition or procedure, for whom a Class I medical guideline recommendation of anticoagulation drug therapy would apply. A Class I medical guideline recommendation represents the highest level of recommendation that patients receive specified medical treatment based on the evidence of the relative risks and benefits of such treatment.

Patients with Class I medical guideline recommendation to receive anticoagulation drug therapy

Population	Number of G7 patients (in millions)
Acute medically ill patients	22.3
Moderate to high risk surgery (including orthopedic surgery)	12.3
Atrial fibrillation	6.6
Acute coronary syndrome	3.5
VTE treatment and secondary prophylaxis	1.7
Total	**46.4**

The population of acute medically ill patients represents the largest patient segment in the anticoagulant market, accounting for nearly half of patients in the G7 countries. Despite the short duration of current VTE prophylaxis for the acute medically ill, typically 6 to 14 days, we believe that annual worldwide sales of enoxaparin for use in acute medically ill patients are at least $2.0 billion.

VTE in acute medically ill patients

The standard of care for VTE prophylaxis in acute medically ill patients is to treat those patients who have certain risk factors with an anticoagulant, such as heparin or enoxaparin, for 6 to 14 days, primarily while the patient is in the hospital. Factors that have been identified as increasing the risk of VTE include several days of restricted mobility, age, an elevated blood marker known as D-dimer, previous VTE event, family history of VTE, smoking, hormonal therapy and others. Almost all hospitalized non-surgical patients have at least one of these risk factors, and approximately two-thirds have two or more risk factors. In-hospital use of anticoagulation has been shown to reduce the incidence of VTEs by approximately 63% and have a net clinical benefit; however, recent registry studies and clinical trials have shown that acute medically ill patients remain at a high risk of VTE during the period after discharge.

For example, one academic study examined the medical records of approximately 11,000 acute medically ill patients for a period of 180 days after hospital admission and determined that 56.6% of VTE events in this population occurred after discharge. In the MAGELLAN trial sponsored by Bayer and Janssen, 5.7% of enoxaparin-treated patients experienced a significant thrombotic event during the trial period, and, in higher risk sub-populations, such event rate was 7% to 9%. In the ADOPT trial sponsored by BMS, the combined incidence of symptomatic VTE and VTE-related death was twice as high during the period after cessation of enoxaparin treatment as it was during the treatment period.

Currently, there are no anticoagulants approved for extended duration VTE prophylaxis in acute medically ill patients for more than a 6- to 14-day period, and most patients receive anticoagulation therapy only while in the hospital. Heparin and enoxaparin are generally not prescribed for use outside of the hospital due to the difficulty of administering the therapies and lack of data showing a benefit beyond the currently approved duration of therapy. Warfarin has not been studied in a large randomized trial and is not indicated for VTE prophylaxis in acute medically ill patients. Both rivaroxaban and apixaban have been evaluated in large Phase 3 trials of VTE prophylaxis in acute medically ill patients, both in the hospital and after discharge. The MAGELLAN trial, which evaluated rivaroxaban, demonstrated efficacy but failed to demonstrate an acceptable benefit to risk profile due to increased bleeding, and the ADOPT trial, which evaluated apixaban, showed a reduction in VTE events, but failed to demonstrate statistically significant efficacy. Importantly, the results of these trials showed that acute medically ill patients with restricted mobility and other risk factors treated with standard duration enoxaparin therapy for 6 to 14 days continue to be at increased risk of VTE post-hospital discharge for 35 days.

Leading clinicians have identified the lack of an appropriate therapy to prevent VTE in acute medically ill patients after discharge as a significant unmet clinical need. Such a therapy should be easy to administer both within and outside of the hospital setting and would need to show a robust reduction in the incidence of VTE and an acceptable bleeding profile compared to the current standard of care. The therapy would also need to have other properties appropriate for use in acute medically ill patients. These patients are typically frail and elderly and often cannot tolerate drugs that are significantly cleared through the kidneys. Moreover, they are often taking multiple medications for concomitant conditions and need a therapy that has a low potential to interact with other medications and a simple dosing regimen.

Betrixaban for extended duration VTE prophylaxis in acute medically ill patients

We believe that Betrixaban is well suited for use in extended duration VTE prophylaxis in acute medically ill patients, both in the hospital and after discharge. Our preclinical and clinical studies suggest that it has antithrombotic activity similar to that of enoxaparin and certain novel oral Factor Xa inhibitors (dabigatran, an anti-thrombin drug and fXa inhibitors; rivaroxaban, apixaban and edoxaban). In addition, it has a number of characteristics that differentiate it from these compounds that we believe are particularly relevant to acute medically ill patients, including:

Orally active with 23 hour half-life	• Ideal for once-daily dosing. • Ease of administration compared to therapies which require multiple doses over a 24 hour period or injections. • Potential for lower peak concentration while still maintaining effective anticoagulation, which could reduce bleeding and VTE risk.
Lower renal clearance compared to other Factor Xa inhibitors	• Potentially allows for more predictable dosing concentrations in the blood of patients with reduced kidney function. • Potentially decreases the risk of bleeding associated with anticoagulants.
Low potential for drug-drug interaction	• Unlike all currently approved direct Factor Xa inhibitors, Betrixaban is not metabolized through the CYP3A4 pathway, a key metabolic route for many approved drugs for a wide range of conditions. • Many acute medically ill patients suffer from a significant underlying illness or one or more chronic conditions and are taking multiple therapies. The concurrent use of multiple CYP3A4 metabolized drugs can result in unpredictable drug levels and other undesirable drug-drug interactions.

Betrixaban clinical experience

Betrixaban has been evaluated in 22 Phase 1 and Phase 2 clinical studies involving 1,411 human subjects, 1,200 of whom received Betrixaban, including more than 100 subjects for six months or more. A series of 19 Phase 1 and clinical pharmacology studies provided substantial information regarding its safety, dosage and use in specific sub-populations. In three Phase 2 studies, Betrixaban was evaluated in specific patient populations relative to commonly used anticoagulants. Consistent with the development of other antithrombotic agents, these studies were not designed to demonstrate a statistically significant difference between groups for the studied outcomes. The Betrixaban Phase 2 studies were instead designed to demonstrate evidence of an anticoagulant effect and relative safety compared to an established comparator. In these clinical studies:

- Betrixaban was well tolerated in diverse patient populations with comparable or better tolerability as compared to warfarin and enoxaparin;
- Betrixaban achieved clinically relevant anticoagulant activity with comparable or less bleeding risk than existing agents; and
- Betrixaban demonstrated predictable pharmacokinetic and pharmacodynamic activity.

As is typical in the development of anticoagulants, our initial Phase 2 study was conducted in patients undergoing elective total knee replacement surgery. This patient population has a very high incidence of VTE, making it an excellent population in which to evaluate the relative effectiveness and safety of different doses as compared to the standard of care. In our 215-patient EXPERT study, two different doses of Betrixaban, 15 mg and 40 mg each given twice daily, were evaluated against a U.S. standard twice-daily dose of 30 mg of enoxaparin in patients undergoing this surgery. The incidence of VTE in the Betrixaban groups was comparable to that in the enoxaparin group and lower than the rates historically observed in placebo groups, although these results were not statistically significant. In addition, the only incidence of major bleeding seen in the study was in the enoxaparin group.

In our 508-patient Phase 2 EXPLORE-Xa study, we evaluated the use of Betrixaban for ischemic stroke prevention in elderly patients with nonvalvular atrial fibrillation. Three different once-daily doses of Betrixaban, 40 mg, 60 mg and 80 mg, were evaluated against dose-adjusted warfarin. Patients with a median age of 74 years received treatment for at least 90 days and as long as 12 months. The incidence of ischemic stroke, as well as major bleeds and clinically relevant non-major bleeds, was comparable across the warfarin and Betrixaban treatment groups, suggesting similar anticoagulant activity and bleeding risk across all groups. In addition, we measured D-dimer levels. D-dimer is a byproduct of coagulation, and elevated levels have been shown to be indicative of an increased risk of thromboembolism. In those patients receiving Betrixaban who had not previously been taking warfarin, we observed a dose-related decrease in D-dimer levels. We believe the results of the EXPLORE-Xa study, although not statistically significant, provide evidence of the anticoagulant activity of Betrixaban and indicate that the long-term use of Betrixaban is well tolerated in an elderly population, including those with moderate to severe kidney disease.

Our Phase 2 DEC study evaluated the utility of adjusting the dose of Betrixaban based on a patient's weight. The study indicated that making such adjustments is not necessary and it provided additional evidence of the safety and activity of Betrixaban.

All of our clinical studies to date have indicated that Betrixaban is well tolerated. Subjects taking Betrixaban had an increased rate of gastrointestinal issues, such as diarrhea, nausea and vomiting, as compared to subjects taking placebo, but these increased rates appear to be similar to those of patients taking other Factor Xa inhibitors. Patients taking Betrixaban also had an increased incidence of other side effects such as back pain, dizziness, headaches, rashes and insomnia as compared with patients taking a placebo or an active comparator. These side effects do not appear to have a substantial impact on patients' tolerance of Betrixaban. There is no evidence that Betrixaban has negative effects on heart rhythm or liver function. As discussed earlier, the most significant side effect of all anticoagulants is major bleeding. While definitive conclusions cannot be drawn from our Phase 2 studies, it does not appear from the study results that patients taking Betrixaban face a greater risk of major bleeding than patients taking warfarin or enoxaparin.

Betrixaban clinical development				
Phase of study	**Number of studies**	**Subjects receiving Betrixaban**	**Objective**	**Selected results**
Phase 1	19	459	Safety, tolerability, pharmacokinetic, pharmacodynamics	Single doses up to 550 mg well tolerated with predictable drug properties
Phase 2 (EXPLORE-Xa and DEC)	2	570	Safety/efficacy in atrial fibrillation patients; safety compared to warfarin	Prophylaxis and bleeding risk comparable to warfarin
Phase 2 (EXPERT)	1	171	Safety/efficacy in knee replacement compared to enoxaparin	Prophylaxis and bleeding risk comparable to enoxaparin

Clinical experience of Factor Xa inhibitors in acute medically ill patients

Direct Factor Xa inhibitors rivaroxaban and apixaban have been studied in large Phase 3 trials for VTE prophylaxis in acute medically ill patients. Neither trial was successful in showing a balanced result of VTE reduction relative to major bleeding events, referred to as net clinical benefit. The MAGELLAN trial, which evaluated rivaroxaban, met its primary efficacy endpoint of decreased VTE in acute medically ill patients but achieved this result with an unfavorable bleeding risk. By comparison, the ADOPT trial, which evaluated apixaban, did not demonstrate significant clinical efficacy, although the rates of VTE in its study population were significantly lower than those observed in MAGELLAN, which we believe reflects the lower risk patient inclusion in ADOPT. Despite the lack of efficacy observed in ADOPT, the incidence of major bleeding was lower than that observed in MAGELLAN. Although neither MAGELLAN nor ADOPT was successful, both highlighted the continuing risk of VTE after hospital discharge and illustrated two major lessons that have informed the clinical development plan for Betrixaban for acute medically ill patients.

Dose selection: In the MAGELLAN trial, rivaroxaban was dosed once daily despite having a half-life of only between 5 to 9 hours. To achieve adequate therapeutic coverage in a once-daily regimen, MAGELLAN may have studied a rivaroxaban dose that produced supratherapeutic drug levels for a period after dosing, possibly explaining the unfavorable bleeding risk observed in that trial. In the ADOPT trial, apixaban with a half-life of 12 hours, was dosed twice daily in order to maintain more consistent drug levels, which may have been responsible for its relatively lower rate of bleeding than was seen in MAGELLAN.

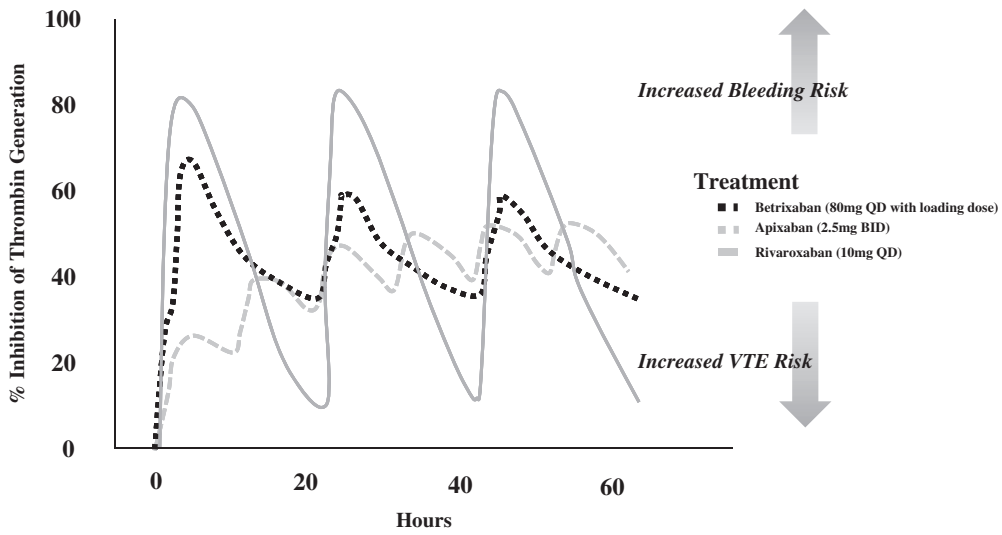
Patient selection: Multiple studies of the acute medically ill have demonstrated that VTE incidence increases as the number of risk factors that a patient has increases. In the ADOPT trial, where enrollment was open to a broad set of acute medically ill patients, including a large number of subjects who were not at high risk of VTE, there were too few VTE events to create a statistically significant separation between the control and treatment arms. In contrast to ADOPT, MAGELLAN enrolled patients with higher levels of VTE risk and treatment with rivaroxaban produced a significant reduction in the 35-day incidence of VTE compared to standard of care treatment with enoxaparin. Neither MAGELLAN nor ADOPT excluded patients whose medical history or concurrent use of anti-platelet therapy placed them at a substantially higher risk of severe bleeding. In MAGELLAN, this failure to exclude certain high risk patients combined with the dosing regimen used may have contributed to the relatively high level of bleeding events observed in the trial and the lack of net clinical benefit.

Phase 3 APEX study

We believe that for an anticoagulant to demonstrate efficacy and safety for extended duration VTE prophylaxis in acute medically ill patients, it must have the right drug properties, be dosed at appropriate levels and target the right patient population. As discussed above, we believe that Betrixaban has a number of key pharmacokinetic and pharmacodynamic properties that make it well suited for use with the frail and elderly patients that comprise a significant portion of the acute medically ill patient population. In addition, using the data from our extensive clinical and preclinical studies of Betrixaban and learnings from ADOPT and MAGELLAN, we believe that we have designed APEX with a dosing regimen for a study population focused on patients with certain biomarkers, that we believe will increase the probability that Apex will demonstrate both safety and efficacy in VTE prophylaxis in acute medically ill patients both in the hospital and after discharge.

Dose selection. Based on standard pharmacometric modeling that integrated preclinical and clinical studies of Factor Xa inhibitors, we believe that we have identified a dosing regimen (80 mg oral once-daily dose for 34 days following a 160 mg oral loading dose on day one that will produce clinically meaningful anticoagulant effects in the APEX trial. In our clinical studies, we measured the concentration of Betrixaban achieved at different dose levels and showed in Phase 2 studies that at total daily doses of 30 mg and 80 mg Betrixaban had anticoagulant activity, measured by standard imaging tests to detect VTE, comparable to standard of care enoxaparin. We also observed that bleeding and anticoagulant activity, as measured by a common blood marker D-dimer, of once-daily 40 mg, 60 mg and 80 mg doses of Betrixaban were comparable to standard doses of warfarin in patients with non-valvular atrial fibrillation. We correlated those doses with levels of thrombin generation inhibition, a common pharmacodynamic measurement used to compare anticoagulant activity of different drugs, and compared those levels with those produced by other Factor Xa inhibitors, including enoxaparin, rivaroxaban and apixaban. For patients with severe renal impairment and those taking agents that are strong inhibitors of PGP enzymes, the dose of Betrixaban will be reduced to 40 mg daily, which targets a level of anticoagulant activity consistent with the overall patient population.

The following diagram depicts pharmacometric modeling of thrombin generation inhibition over time for rivaroxaban, apixaban and Betrixaban, reflecting the dosing regimen used in MAGELLAN, ADOPT and APEX, respectively:



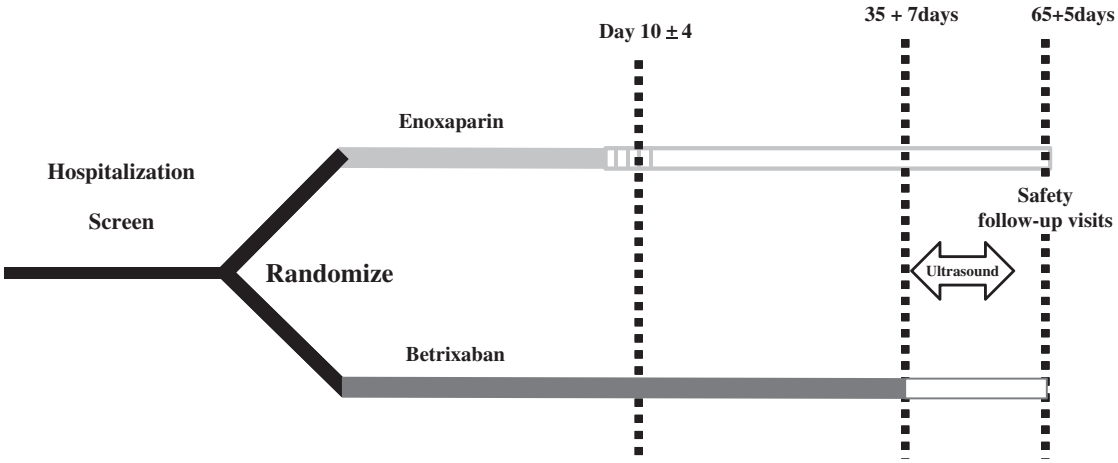
Patient selection: efficacy. We used the findings of MAGELLAN, ADOPT and other trials to help define the population of patients to be included in APEX. APEX is enrolling patients that have a combination of specific medical conditions and risk factors that put them at an elevated risk of VTE for 35 days after enrollment. The APEX inclusion criteria specify that patients must be admitted to the hospital with one of five categories of acute medical illness: heart failure, respiratory failure, infection, rheumatic disease or stroke. The inclusion criteria also require that patients have a high degree of immobilization. Further, a patient must meet one of the following three additional criteria: have a D-dimer level of at least twice the upper limit of normal, be older than 75 years or have at least one additional risk factor for VTE, specifically have elevated D-dimer blood levels or be over the age of 75, we are more likely to demonstrate net clinical benefit from extended duration VTE prophylaxis.

Patient selection: safety. Consistent with our approach to enroll patients into the APEX study that are at an elevated risk for VTE for 35 days or more, we likewise designed the trial to exclude patients at high risk for bleeding. We believe this further increases the probability that APEX will demonstrate a net clinical benefit for Betrixaban. For example, we exclude patients with a previous history of major surgery, gastrointestinal bleeding, hemorrhagic stroke or bleeding pulmonary lesions. In addition, patients taking daily doses of aspirin are limited to low doses and must also take a proton-pump inhibitor to reduce the risk of gastrointestinal bleeding.

Other study design features and operations measures. We have implemented various measures to improve data quality, ensure we maintain a high degree of statistical power and reduce confounding clinical and statistical issues compared to MAGELLAN and ADOPT. For example, we are transmitting ultrasound images electronically rather than by mail so that quality can be assessed in real time. We do not require an ultrasound at day 10, which was required in an earlier study and that we believe led to patients failing to return for a second ultrasound at day 35. We also instituted patient outreach measures intended to increase patient compliance with follow-up appointments after hospital discharge. We expect our approach to result in a lower incidence of missing data in the primary endpoint analysis and therefore increase study power for a given number of patients.

We designed our Phase 3 APEX study to demonstrate the safety and efficacy of Betrixaban for extended duration VTE prophylaxis during a hospital stay and post-discharge for 35 days in acute medically ill patients with restricted mobility and certain biomarkers and additional risk factors. If APEX is successful, we expect it to be sufficient to support global regulatory approvals. We can provide no assurance that APEX will be successful and, if APEX is not successful, our ability to commercialize Betrixaban would be materially adversely affected. APEX is a randomized, double-blind, active-controlled, multicenter, multinational study comparing a once-daily dose of 80 mg of Betrixaban for 35 days (including both in the hospital and after discharge) with in-hospital administration of 40 mg of enoxaparin once daily for 6 to 14 days followed by placebo. It is expected to enroll approximately 6,850 patients at over 450 study sites throughout the world. The primary study objective is to demonstrate superiority as compared to the current standard of care in the reduction of VTE-related events at 35 days while maintaining a favorable benefit to risk profile. The APEX study is adequately powered to show a clinically relevant benefit with a p-value of less than 0.01 on the primary endpoint of total asymptomatic proximal DVT (as detected by ultrasound), symptomatic DVT (proximal or distal), non-fatal pulmonary embolism and VTE-related death. The first patient was enrolled in March 2012, and, based on current enrollment, we expect patient enrollment to be completed by the end of 2015. Four preliminary safety data reviews an independent monitoring committee, have been completed and the committee recommended that the study continue as planned. In February 2015, the Independent Data Monitoring Committee (IDMC) recommended that the Phase 3 APEX (Acute Medically Ill VTE Prevention with Extended Duration Betrixaban) Study of Betrixaban continue as planned without modification based on the successful completion of a pre-specified futility analysis. In making this recommendation, the IDMC evaluated preliminary efficacy trends and safety reports from the first 50% of the patients enrolled.

The following schematic depicts the APEX study design:



Betrixaban (either 80 or 40 mg PO QD) with enoxaparin placebo SQ QD
Enoxaparin(either 40 or 20 mg SQ QD) for 10 ± 4 days with betrixaban placebo
Note: No ultrasound is required at hospital discharge. Only one ultrasound is required at 35 (+7) day follow up

We believe that Betrixaban's unique pharmacological profile combined with APEX's study design positions Betrixaban to be the first novel anticoagulant approved for use in acute medically ill patients and the first anticoagulant approved for extended duration VTE prophylaxis in the acute medically ill patient population. We anticipate that such an approval, if obtained, would be for the use of Betrixaban in those acute medically ill patients with medical profiles consistent with those of patients enrolled in APEX. Based upon a review of epidemiological data, we believe that such patients constitute approximately two thirds of the acute medically ill patient population subject to a medical guideline recommendation to receive pharmacological VTE prophylaxis, or approximately 14 million patients in the G7 countries.

Betrixaban pharmacoeconomics

Oral drugs are typically less expensive than injectable agents. Currently in thrombosis, based on our research, we estimate that the average daily wholesale acquisition cost of a 40 mg Lovenox pre-filled syringe in the United States is $33.08 compared to rivaroxaban at $10.49 per day for both the 10 mg and 20 mg strengths. In addition, the cost to treat a VTE in a hospital setting in the United States can reach $16,500 per patient in direct medical expenses. Therefore, we believe that, if our APEX Phase 3 study is successful, Betrixaban could represent a cost-effective preventive therapy against VTE in acute medically ill patients as compared to the current standard of care. We estimate that by 2016, the total potential market for VTE prophylaxis in the acute medically ill population, including extended duration VTE prophylaxis, will be $3 billion to $4 billion.

Andexanet alfa

Major bleeding is the most clinically meaningful side effect of oral and injectable Factor Xa inhibitors, including apixaban, rivaroxaban, edoxaban, Betrixaban and enoxaparin. Andexanet alfa is a recombinant protein designed to reverse anticoagulant activity in patients treated with a Factor Xa inhibitor. Andexanet alfa has potential indications to treat patients who are taking a direct or indirect Factor Xa inhibitor and who suffer major bleeding episode or require emergency surgery.

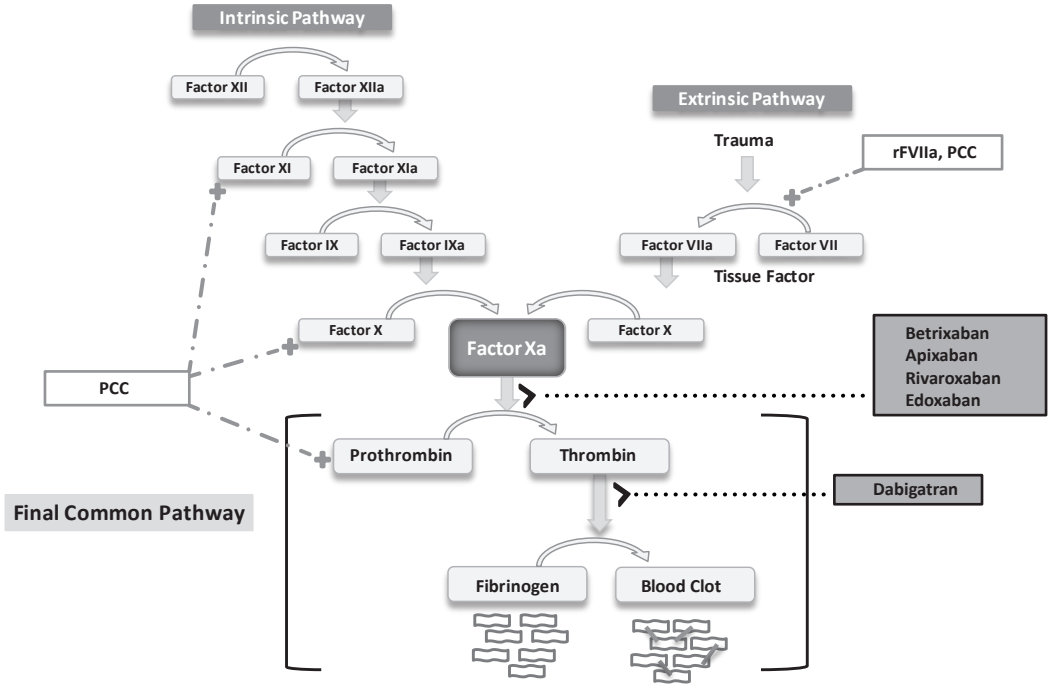
Overview of anticoagulant-related bleeding

In patients using anticoagulation therapy, there is an increased risk of major bleeding, which is common across all anticoagulants regardless of the reason for anticoagulation therapy, the patient setting or the duration of therapy. For patients at an elevated risk of thrombosis, the benefits provided by anticoagulation products generally outweigh the related risk of bleeding, however, major bleeding remains a significant cause of morbidity and mortality in these patients. For example, atrial fibrillation patients taking Factor Xa inhibitors on a chronic basis had a 1% to 4% annual rate of a major bleed in the Phase 3 ARISTOTLE trial of apixaban, sponsored by BMS and Pfizer, and the Phase 3 ROCKET trial of rivaroxaban, sponsored by Bayer and Janssen. Based on other clinical trials, we believe that annually an additional 1% of patients taking Factor Xa inhibitors will require emergency surgery. Patients on anticoagulation who suffer trauma have a higher risk of death than similar patients not on anticoagulation. The cost of treating a major bleed may exceed $100,000 in direct medical expenses..

The current standard treatment for patients taking established anticoagulants who experience major bleeding is to administer products that directly or indirectly support clotting, such as Vitamin K; fresh frozen plasma, or FFP; prothrombin complex concentrates, or PCCs; protamine; and recombinant Factor VIIa, or rFVIIa. Which of these approaches is used for a given patient depends on the particular anticoagulant being taken. For example, common treatments for warfarin reversal are Vitamin K, FFP and, more recently, PCCs, while low molecular weight heparin patients needing reversal are often managed with FFP or protamine. We estimate that Vitamin K alone is administered approximately 400,000 times each year in the United States to reverse the effects of anticoagulants. While the existing reversal agents are effective to varying degrees to reverse the effects of established anticoagulants, they can have potentially serious side effects, including in some cases increased risk of prothrombotic effects such as ischemic stroke and myocardial infarction.

There are, however, no approved antidotes or reversal agents for the new oral Factor Xa inhibitors. Moreover, the reversal agents used for established anticoagulants have not been extensively studied in clinical trials of oral Factor Xa inhibitor treated patients, and preliminary data suggest that they may not be effective to treat major bleeding in these patients. The existing reversal agents work mostly in the early steps of the coagulation cascade prior to the involvement of Factor Xa and simply supplement the factor deficiency caused by established anticoagulants. For the reversal agents to affect bleeding in patients taking oral Factor Xa inhibitors, sufficiently large quantities would need to be given to overwhelm the inhibitor, an approach that we believe could lead to dangerous prothrombotic effects. As there are no currently approved therapies designed to reverse or overcome Factor Xa inhibitors, patients taking those therapies face a risk of major bleeding. Leading clinicians have identified, and the FDA has recognized, the lack of a reversal agent for Factor Xa inhibitors as a significant unmet clinical need.

The following diagram depicts where the existing reversal agents and novel oral anticoagulants interact with the coagulation cascade:



Despite the risk of major bleeding, sales of Factor Xa inhibitors are expected to increase dramatically in the coming years as they have significant clinical benefits over standard products for preventing thrombosis, such as warfarin or enoxaparin. Based on our research and relevant market data, we estimate that by 2020, Factor Xa inhibitors will have a majority share of the market in each major anti-coagulation indication. As sales of Factor Xa inhibitors increase, the need for an effective antidote or reversal agent will correspondingly increase. We estimate that by 2020, over 500,000 patients annually in the G7 will need a Factor Xa reversal agent, with approximately 300,000 of these cases arising from a major bleeding episode, approximately 100,000 of these cases arising from emergency surgery and approximately 100,000 of those cases arising from traumatic injury.

Andexanet alfa — a universal antidote for Factor Xa inhibitors

Building on the insights gained during the development of Betrixaban, we designed Andexanet alfa as a universal reversal agent for direct Factor Xa inhibitors, such as rivaroxaban, apixaban, edoxaban and Betrixaban, as well as indirect Factor Xa inhibitors, such as enoxaparin. Andexanet alfa is structurally very similar to native Factor Xa, but it has a number of limited modifications intended to restrict its biological activity to reversing the effects of Factor Xa inhibitors. Andexanet alfa acts as a Factor Xa decoy that binds to Factor Xa inhibitors in the blood. Once bound to Andexanet alfa, the inhibitors are unable to bind to and inhibit native Factor Xa. The native Factor Xa then becomes available to participate in the coagulation process and restore hemostasis, or normal clotting.

In designing Andexanet alfa, we started with native Factor Xa protein and used our knowledge of its functional domains to make three changes by protein engineering. First, we made a small modification to the active site, or catalytic pocket, of native Factor Xa so that Andexanet alfa cannot drive the coagulation process but still binds to Factor Xa inhibitors with high affinity. Second, we removed most of the section of the native Factor Xa that facilitates binding to the thrombin activating complex to reduce the risk that Andexanet alfa would interfere with the activity of native Factor Xa. Importantly, while removing this section we retained a small portion at the end so that Andexanet alfa looks more like native Factor Xa to the immune system, thereby decreasing the likelihood of an immune system response against Andexanet alfa. Third, we made a minor modification in the peptide section that links the two parts of Factor Xa to facilitate Andexanet alfa's manufacture using standard processes. The end result is a recombinant protein that we believe can bind with and sequesters any direct or indirect Factor Xa inhibitor, thereby allowing native Factor Xa to drive coagulation and restore hemostasis.

Andexanet alfa preclinical results

We have evaluated Andexanet alfa in numerous in-vitro and animal studies and have developed substantial evidence supporting the safety, efficacy and rapid activity of Andexanet alfa. Key findings from this preclinical program include:

- In isolated human plasma, we have measured multiple pharmacodynamic measures of coagulation, such as anti-Factor Xa units, prothrombin time and activated partial thromboplastin time as well as key pharmacokinetic measures and have shown that Andexanet alfa reverses the effects of all Factor Xa inhibitors we have studied, including rivaroxaban, Betrixaban, apixaban, enoxaparin and fondaparinux.

- In tail transection blood loss models in rats and mice, we have shown that Andexanet alfa significantly reduces the amount of blood loss compared to placebo in animals treated with enoxaparin, fondaparinux, or rivaroxaban plus aspirin. In studies where Andexanet alfa was given five or ten minutes after the transection, blood loss was significantly reduced compared to animals not given Andexanet alfa.

- In a rabbit liver laceration model, we have shown that Andexanet alfa reduces the level of bleeding in rivaroxaban-treated rabbits to levels comparable to those of rabbits not anticoagulated with rivaroxaban whether given before or after the liver incisions. We have also shown that administration of pro-thrombotic agents, rFVIIa and prothrombin complex concentrates, fails to decrease the amount of blood loss in rabbits treated with rivaroxaban. In addition, we have shown that in rabbits treated with Andexanet alfa, but without rivaroxaban, bleeding levels were comparable to those of untreated rabbits, suggesting that Andexanet alfa alone does not have significant pro-coagulative effects.

- In a cynomolgus monkey safety study, animals were dosed multiple times with Andexanet alfa, both alone and in the presence of several Factor Xa inhibitors, without any evidence of significant toxicity.

- In a cynomolgus monkey study, administration of Andexanet alfa alone was associated with a transient increase in certain coagulation markers consistent with a known interaction between Andexanet alfa and tissue factor pathway inhibitor, or TFPI, another element in the coagulation process. These blood markers, which are indicative of increased thrombin generation, were not associated, however, with any evidence of clot formation or fibrin deposition in detailed histopathological examination of the monkeys at necropsy.

Taken together, these and other studies suggest, but do not prove, that Andexanet alfa will be a safe and effective Factor Xa reversal agent.

Andexanet alfa clinical results and development strategy

Based on the results of our initial Phase 2 study, we held an End of Phase 2 meeting with the FDA in August 2013 to discuss the remaining clinical studies needed for approval of Andexanet alfa. In November 2013, the FDA granted breakthrough therapy designation for Andexanet alfa and we are pursuing an Accelerated Approval pathway for Andexanet alfa. We initiated Phase 3 registration studies for Andexanet alfa in the first half of 2014 and initiated a Phase 4 confirmatory study in early 2015. The results from our Phase 3 studies along with data from a limited number of patients in the ongoing Phase 4 confirmatory study will support filing a BLA for conditional approval by the end of 2015. In the second half of 2014, we obtained formal scientific advice from the EMA which also supports using the same clinical data package for submitting for regulatory approval in Europe. Our initial conversations with the PMDA in Japan, also in the second half of 2014, support a similar regulatory path in Japan. However, additional guidance is needed to determine our approval strategy for Japan.

Andexanet alfa Phase 2 studies

We have completed a series of Phase 2 proof-of-concept studies evaluating the safety and activity of Andexanet alfa in healthy volunteers who were administered one of several Factor Xa inhibitors. The purpose of these studies is to evaluate the safety of Andexanet alfa and to determine the dose of Andexanet alfa required to reverse the effect of each anticoagulant as measured by multiple pharmacokinetic and pharmacodynamic endpoints. Results from our Phase 2 studies with apixaban, rivaroxaban, edoxaban and enoxaparin, demonstrated a bolus of Andexanet alfa immediately reversed the anticoagulation activity of each Factor Xa inhibitor and that the reversal could be sustained with a continued infusion of Andexanet alfa. Andexanet alfa was shown to be well tolerated with no thrombotic events or antibodies to Factor Xa or Factor X detected.

In these studies the Factor Xa inhibitor was dosed in healthy volunteers for five or six days to achieve steady-state drug levels. Andexanet alfa was then administered intravenously in a range of bolus only and bolus plus infusion dose regimens. Pharmacodynamic and safety data were collected through Day 48 with pharmacokinetic data through Day 10. The primary endpoint for each of these studies is the percent reversal of anti-Factor Xa activity after dosing.

In the Phase 2 studies Andexanet alfa was generally well tolerated with no apparent safety signals. Importantly, none of the subjects receiving Andexanet alfa generated detectable levels of antibodies against either Factor X or Factor Xa and there have been no neutralizing antibodies against Andexanet alfa detected. The most common drug-related side effect was mild infusion-related reactions, which are not unexpected for a biological agent, such as Andexanet alfa. In the Phase 2 studies, there was also a dose-dependent restoration of thrombin generation with no clinical evidence of thrombosis.

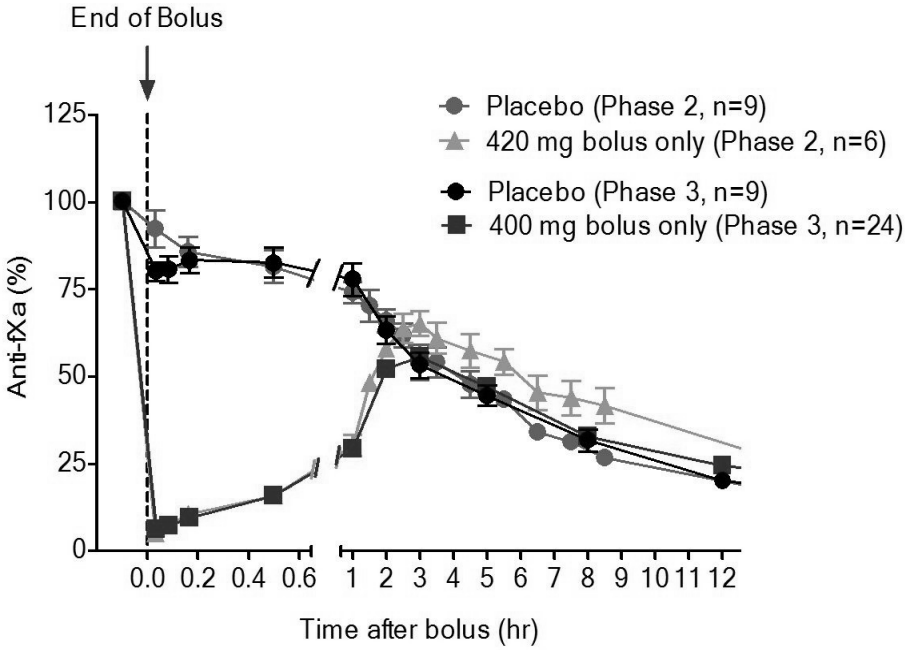
Based on the results of our initial Phase 2 study, we held an End of Phase 2 meeting with the FDA in August 2013 to discuss the remaining clinical studies needed for approval of Andexanet alfa. Typically the FDA requires at least one large-scale, randomized, placebo controlled study for approval of a new therapeutic. However, under the FDA's "Accelerated Approval" pathway, therapies targeting a significant unmet clinical need may be approved based upon their showing adequate safety as well as efficacy against a surrogate biomarker endpoint in a clinical trial. In November 2013, the FDA granted breakthrough therapy designation for Andexanet alfa and therefore we are pursuing an Accelerated Approval pathway for Andexanet alfa. Utilizing this expedited approval process should significantly decrease the time and expense associated with our development program. After additional discussions with the FDA in 2014, including a formal End of Phase 2 meeting, we have initiated multiple Phase 3 studies (ANNEXA™ - Andexanet Alfa a Novel Antidote to the Anticoagulant Effects of FXa Inhibitors) with study design similar to our Phase 2 proof-of-concept studies along with a Phase 4 study evaluating the safety and efficacy of Andexanet alfa in patients experiencing severe bleeding while being treated with rivaroxaban, apixaban or enoxaparin. The Phase 3 studies are being conducted under an Accelerated Approval pathway using biomarker endpoints for conditional approval. These biomarkers include anti-Factor Xa levels, plasma free fraction of the anticoagulant and thrombin generation.

Phase 3 ANNEXA-A (Andexanet Alfa a Novel Antidote to the Anticoagulant Effects of fXA Inhibitors – Apixaban) Study Design and Results

The randomized, double-blind, placebo-controlled Phase 3 ANNEXA-A study is evaluating the safety and efficacy of Andexanet alfa in reversing apixaban-induced anticoagulation in older healthy volunteers. Efficacy is being evaluated using biomarker endpoints, including anti-Factor Xa levels as the primary endpoint. Secondary endpoints include levels of plasma unbound (free fraction) of apixaban and thrombin generation.

In the first part of the Phase 3 ANNEXA-A trial, 33 healthy volunteers (ages 50-73) were given apixaban 5 mg twice daily for four days and then randomized in a 3:1 ratio to Andexanet alfa administered as a 400 mg IV bolus (n=24) or to placebo (n=9). The study achieved all of its primary and secondary endpoints with statistical significance (p value <0.0001). In the study, two to five minutes after completion of a bolus dose of Andexanet alfa, the anticoagulant activity of apixaban was reversed by approximately 94 percent (p value <0.0001) compared with placebo as measured by anti-Factor Xa activity. Every subject treated with Andexanet alfa had between 90 and 96 percent reversal of the anticoagulant activity of apixaban. The reversal of anti-Factor Xa activity correlated with a significant reduction in the level of free, unbound apixaban in the plasma, consistent with the mechanism of action of Andexanet alfa. Additionally, Andexanet alfa restored thrombin generation to baseline normal levels (prior to apixaban therapy). In this study, no serious adverse events, thrombotic events, or antibodies to Factor X or Xa were reported following Andexanet alfa administration. Mild infusion reaction was reported in three subjects.

The following diagram depicts the data from the first part of our Phase 3 ANNEXA-A study of Andexanet alfa in subjects taking apixaban.



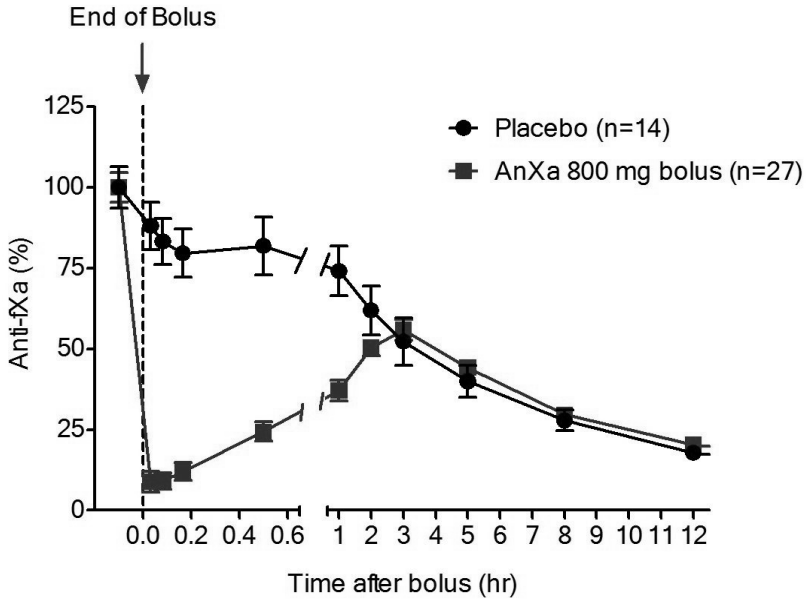
In the second part of the ANNEXA-A study, 32 healthy volunteers will be given apixaban 5 mg twice daily for four days and then randomized in a 3:1 ratio to Andexanet alfa administered as a 400 mg IV bolus followed by a continuous infusion of 4 mg/min for 120 minutes or to placebo. These data are expected in the first half of 2015.

Phase 3 ANNEXA-R (Andexanet Alfa a Novel Antidote to the Anticoagulant Effects of FXa Inhibitors – Rivaroxaban) Study Design and Results

The randomized, double-blind, placebo-controlled Phase 3 ANNEXA-R study is evaluating the safety and efficacy of Andexanet alfa in reversing rivaroxaban-induced anticoagulation in healthy volunteers ages 50-75 years. Efficacy is being evaluated using biomarker endpoints, with anti-Factor Xa levels as the primary endpoint. Secondary endpoints include plasma levels of plasma unbound (free fraction) of rivaroxaban and thrombin generation levels.

In the first part of the ANNEXA-R study, 41 healthy volunteers were given rivaroxaban 20 mg once daily for four days and then randomized in a 2:1 ratio to receive at Cmax either Andexanet alfa administered as an 800 mg IV bolus (n=27) or to placebo (n=14). The study achieved its primary endpoint with high statistical significance. Results showed that Andexanet alfa significantly and immediately reversed the anticoagulation activity of rivaroxaban. Andexanet alfa was shown to be well tolerated.

The following diagram depicts the data from the first part of our Phase 3 ANNEXA-R study of Andexanet alfa in subjects taking rivaroxaban.



In the second part of the ANNEXA-R study, approximately 40 healthy volunteers will be given rivaroxaban 20 mg once daily for four days and will then be randomized in a 2:1 ratio to receive either Andexanet alfa administered as an 800 mg IV bolus followed by a continuous infusion of 8 mg/min for 120 minutes or to placebo. Data from this part of the study are expected in mid-2015.

Our Phase 4 ANNEXA-4 study, which was initiated in January 2015, is an open-label, single-arm study being conducted in patients receiving apixaban, rivaroxaban, edoxaban or enoxaparin (a low molecular weight heparin) who present with an acute major bleed. Acute major bleeding includes life-threatening bleeding, bleeding associated with very low blood counts, or bleeding that occurs in a critical area such as the brain or surrounding the heart. The trial excludes bleeding due to major trauma and large blood vessel rupture. Patients will receive Andexanet alfa as an intravenous (IV) bolus followed immediately by a continuous infusion. The study is evaluating Andexanet alfa's ability to decrease anti-Factor Xa activity and restore hemostasis in patients. Safety endpoints include overall 45 day safety, including an evaluation of thrombotic activity and antibody development. Data from a small number of patients in this study will be included in our BLA filing at the end of 2015 as part of an Accelerated Approval pathway for Andexanet alfa.

At the conclusion of the registration studies, we plan to submit that data along with available interim data from the Phase 4 ANNEXA-4 study as part of a BLA, for Accelerated Approval in the United States and subsequently as part of a MAA in Europe. If the registration studies are successful, we believe these data could be sufficient to obtain approval for Andexanet alfa from the FDA and the EMA.

Collaboration with BMS and Pfizer

In October 2012, we entered into a three-way agreement with BMS and Pfizer to include subjects dosed with apixaban, their jointly owned product candidate, in one of our Phase 2 proof-of-concept studies of Andexanet alfa. The total consideration under this agreement of $6.0 million was received and recognized as revenue on a straight-line basis over the estimated performance period through the fourth quarter of 2013. This agreement will continue in force until our anticipated meeting with the FDA or termination by either party pursuant to the agreement. BMS and Pfizer may terminate this agreement if the parties cannot agree on certain changes to the development plan, for convenience with 60 days' advance written notice or for our bankruptcy or change of control. In addition, either party may terminate this agreement for the other party's uncured material breach or for material safety issues.

In January 2014, we entered into a second collaboration agreement with BMS and Pfizer to further study the safety and efficacy of Andexanet alfa as a reversal agent to apixaban in our Phase 3 studies. Under the terms of the agreement, we received an upfront payment of $13.0 million and are eligible to receive additional development and regulatory milestone payments of up to $12.0 million. These payments represent the total consideration under this agreement. BMS and Pfizer will continue to provide development and regulatory guidance for the program.

This Phase 3 collaboration agreement will continue in force until the approval of Andexanet alfa as a reversal agent for apixaban by the FDA and EMA. BMS and Pfizer may terminate this agreement for convenience with 60 days' advance written notice or for our bankruptcy or change of control. In addition, either party may terminate this agreement for the other party's uncured material breach, material safety issues, or failure of the Phase 3 studies.

Under both agreements with BMS and Pfizer, we retain full, worldwide development and commercial rights to Andexanet alfa.

Collaboration with Bayer and Janssen

In February 2013, we entered into a three-way agreement with Bayer and Janssen to include subjects dosed with rivaroxaban, their Factor Xa inhibitor product, in one of our Phase 2 proof-of-concept studies of Andexanet alfa. We are responsible for the cost of conducting such clinical studies. Pursuant to the agreement, Bayer and Janssen will work closely with us on both development and regulatory aspects of Andexanet alfa in connection with our Phase 2 proof-of-concept studies. Under the agreement, Bayer and Janssen have each provided us with an upfront and non-refundable fee of $2.5 million, for an aggregate fee of $5.0 million, and will each provide us with an additional payment of $250,000, for an aggregate fee of $500,000, following the delivery of the final written study report of our Phase 2 proof-of-concept studies of Andexanet alfa, as further specified in the agreement. This agreement will continue in force until the later of the completion of the studies and the fulfillment of certain other conditions set forth in the agreement, unless earlier terminated by either party pursuant to the agreement. This agreement may be terminated by either party for material safety issues or the other party's uncured material breach. In addition, Bayer and Janssen may terminate this agreement with 60 days' advance written notice for convenience at any time, or immediately for our bankruptcy or change of control.

In January 2014, we entered into a second collaboration agreement with Bayer and Janssen to further study the safety and efficacy of Andexanet alfa as a reversal agent to rivaroxaban through our Phase 3 studies. Our original collaboration agreement with Bayer and Janssen covers the conduct of a Phase 2 proof-of-concept study. The second collaboration agreement covers the conduct of Phase 3 studies of Andexanet alfa with rivaroxaban and any potential U.S. and EU regulatory approval of Andexanet alfa as reversal agent of rivaroxaban. The Phase 3 studies are ongoing. Under this Phase 3 collaboration agreement, we received an upfront payment of $10.0 million and are eligible to receive additional development and regulatory milestone payments of up to $15.0 million. These payments represent the total consideration under this agreement. Bayer and Janssen will continue to provide development and regulatory guidance for the program.

This Phase 3 collaboration agreement will continue in force until the approval of Andexanet alfa as a reversal agent for rivaroxaban by the FDA and EMA. Bayer and Janssen may terminate this agreement for convenience with 60 days' advance written notice or for our bankruptcy or change of control. In addition, either party may terminate this agreement for the other party's uncured material breach or material safety issues or we can also terminate this agreement for failure of the Phase 3 studies.

Under both agreements with Bayer and Janssen, we retain full, worldwide development and commercial rights to Andexanet alfa.

Collaboration with Daiichi Sankyo

In June 2013, we entered into an agreement with Daiichi Sankyo, to include subjects dosed with edoxaban, Daiichi Sankyo's Factor Xa inhibitor product, in one of our proof-of-concept studies of Andexanet alfa. We are responsible for the cost of conducting this clinical study. Under the terms of the agreement, Daiichi Sankyo provided us with an upfront fee of $6.0 million. Daiichi Sankyo may terminate the agreement at any time. We are obligated to perform preclinical proof-of-concept studies and participate on a JCC with Daiichi Sankyo to oversee the collaboration activities under the agreement. The total non-contingent consideration under this agreement of $3.0 million was fully recognized as revenue on a straight-line basis over the estimated non-contingent performance period through the first quarter of 2014. In February 2014, we resolved the contingent portion of the arrangement which was tied to pre-clinical studies. The contingent consideration under this agreement of $3.0 million is being recognized over the remaining estimated period of performance through the first quarter of 2015.

In July 2014, we entered into a second collaboration agreement with Daiichi Sankyo to evaluate Andexanet alfa as a reversal agent for the oral Factor Xa inhibitor edoxaban through Phase 3 studies. The second collaboration agreement covers the conduct of Phase 3 studies of Andexanet alfa with edoxaban and any potential U.S. and EU regulatory approval of Andexanet alfa as a reversal agent for edoxaban. Under this Phase 3 collaboration agreement we received an upfront payment of $15.0 million and are eligible to receive additional development and regulatory milestone payments of up to $25.0 million. These payments represent the total consideration under this agreement. Daiichi Sankyo will continue to provide development and regulatory guidance for the program.

This Phase 3 collaboration agreement will continue in force until the approval of Andexanet alfa as a reversal agent for edoxaban by the FDA and EMA. Daiichi Sankyo may terminate this agreement for convenience with 60 days' advance written notice or for our bankruptcy or change of control. In addition, either party may terminate this agreement for the other party's uncured material breach or material safety issues, and we can also terminate this agreement for failure of the Phase 3 studies.

Under both agreements with Daiichi Sankyo, we retain full, worldwide development and commercial rights to Andexanet alfa.

Antidote pharmacoeconomics

Major bleeding is the most clinically relevant side effect of anticoagulant treatment across all anticoagulants and clinical settings. Clinical trial results suggest that the frequency of major bleeding associated with the administration of Factor Xa inhibitors ranges from 1% to 4% per year, depending on the underlying medical condition and the specific Factor Xa inhibitor. The clinical costs of a major bleeding event in anticoagulant treated patients are estimated to be $15,000 to $52,000 per patient during the year following the event. Based on the frequency of bleeding rates suggested by clinical trials and our projection of 23 million to 36 million patients treated annually with Factor Xa inhibitors in the G7 countries, we believe that by 2020, the annual costs to the healthcare system to treat major bleeding episodes in patients treated with a Factor Xa inhibitor may exceed $10 billion. We believe that an effective Factor Xa antidote represents a potentially cost-effective way to manage these healthcare system costs.

Our hematologic cancer and inflammation product candidates

Our early stage development programs are focused on developing small molecule kinase inhibitors for the treatment of hematologic cancers and inflammatory diseases. Kinases are enzymes that act on and modify the activity of different proteins. Syk and JAK are clinically validated kinase targets involved in key signaling pathways that are important in certain hematologic cancers and inflammatory disorders. We have focused on the discovery and development of specific inhibitors of Syk and dual inhibitors of both Syk and JAK based on the unique roles of these kinases in NHL, CLL, allergic asthma, rheumatoid arthritis, or RA, and other inflammatory diseases.

Syk overview

Syk is a cell signaling enzyme that is found in certain white blood cells, including B-cells, basophils, neutrophils, monocytes, and tissue macrophages and mast cells, and is important for controlling the activity and recruitment of these cells. Scientists have focused on the role of Syk in B-cell cancers, such as NHL and CLL, as well as certain inflammatory diseases, such as allergic asthma and RA. B-cell activation is driven by the B-cell receptor, or BCR, whose signaling promotes cell proliferation, adhesion and survival in NHL and CLL. Syk acts downstream of the BCR, and blocking Syk activity in preclinical models results in an inhibition of proliferation, a disruption of tumor cell adhesion and cell death in malignant B-cells. Inhibitors of the BCR pathway, including the Syk inhibitor fostamatinib being developed by Rigel Pharmaceuticals, Inc. and the Syk inhibitor entospletinib being developed by Gilead Sciences, Inc., or Gilead, have been shown to have activity in NHL and CLL

JAK overview

The JAK kinases are a family of related tyrosine kinases that play key roles in cytokine signaling involved in immune processes. JAK activation and signaling is directly downstream from receptors for several cytokines that are integral to normal lymphocyte activation, proliferation and function. JAK also plays a role in malignant lymphocytes, including the survival and proliferation of CLL cells as well as cytokine signaling in certain NHL and other cancers. Leading clinicians have hypothesized that these JAK-related cytokines play a key role in promoting tumor survival and growth and that JAK inhibition may be effective in interrupting signaling processes involved in tumor cells that have mutated and are no longer entirely dependent on B-cell signaling via BCR.

Cerdulatinib—dual Syk/JAK inhibitor

The lead compound in our kinase development effort, Cerdulatinib, is a potent inhibitor of both Syk and JAK. We believe that Cerdulatinib may be able to treat certain diseases that involve Syk-BCR signaling and cytokine-JAK signaling. Based on the inhibition of these key pathways, we are currently focused on developing Cerdulatinib for NHL, CLL and other hematologic cancers, with a focus on patients with certain treatment-resistant mutations, including those targeting the BTK and PI3K kinases, and certain inflammatory diseases. In October 2013, we initiated a Phase 1/2a proof-of-concept study in NHL and CLL and reported interim data from the Phase 1 portion of this study at the American Hematology Association Meeting in December 2014. We are advancing Cerdulatinib into the Phase 2a portion of the study which includes expansion cohorts at the recommended Phase 2 dose.

NHL and CLL

Lymphoma is a large class of hematologic cancer that affects the B-cell and T-cell lymphocytes in lymph nodes. In 2011, lymphoma affected an estimated 660,000 people in the United States, with 500,000 of them suffering from the NHL varieties of the disease. NHL is often aggressive, marked by rapidly growing tumors in the lymph nodes, spleen, liver, bone marrow and other organs.

CLL is also a hematologic cancer that affects B-cell lymphocytes in the blood and bone marrow and is the most common type of leukemia. In 2011, approximately 100,000 patients had CLL in the United States. As it advances, usually slowly, CLL results in swollen lymph nodes, spleen and liver and eventually in anemia and infections.

Despite the introduction of novel therapies for B-cell NHL and CLL, some patients fail to go into remission and of those who do attain remission, many relapse and develop refractory disease and therefore need alternative therapies. The heterogeneity and severity of B-cell malignancies may warrant simultaneous targeting of multiple disease-relevant pathways. Dual inhibition of Syk and JAK represents such a strategy and may have several benefits relative to selective kinase inhibition, such as gaining control over a broader array of disease etiologies, reducing the probability of selection of alternate disease growth mechanisms, and the potential that an overall lower level suppression of multiple targets may be sufficient to modulate disease activity.

Cerdulatinib is a highly potent inhibitor of Syk and JAK activity in blood cells from human volunteers. In preclinical studies, inhibition of Syk and JAK, via Cerdulatinib, was active in a broad panel of B-cell lymphoma cell lines. Cerdulatinib was more effective than Syk-specific inhibition in these cell lines, suggesting that Cerdulatinib may be useful in the treatment of a broad range of B-cell lymphomas, including patients with diffuse large B-cell lymphoma, or DLBCL, an aggressive form of NHL that affects over 80,000 patients in the G7 countries, and patients with hard to treat mutations. For example, Cerdulatinib was shown to be effective in cell lines dependent on NFkB mutations for their survival. Current therapies and those in development, including those targeting the BTK and PI3K kinases, have limited activity in DLBCL patients with these mutations. In addition, preclinical data suggest that dual Syk/JAK inhibition with Cerdulatinib may also have activity in patients with an inadequate response to novel specific kinase inhibitors in development for NHL and CLL. Our strategy includes targeting Cerdulatinib for certain CLL and NHL patient populations, such as those with specific genetic mutations or those who have not responded adequately to other treatments. For example, it is estimated that approximately one third of patients become refractory to standard CLL therapy. We believe these indications could potentially represent a significant commercial opportunity if we are able to develop an effective therapy.

Based on the preclinical data and our understanding of the role of Syk and JAK signaling in B-cell cancers, we initiated an open label Phase 1/2a proof-of-concept study in NHL and CLL patients who have failed or relapsed on existing marketed therapies or products in development, including patients with identified mutations, in October 2013. In the initial phase of this study, we are evaluating the safety and activity of Cerdulatinib using escalating doses. Interim results from the Phase 1 dose-escalation portion of the study demonstrated that Cerdulatinib is active and well tolerated, including patients who have received prior BTK and P13K inhibitor therapies. Based on these interim data, we are advancing Cerdulatinib into the Phase 2a portion of the study which includes expansion cohorts in patients at the recommended Phase 2 dose. This will allow us to test in patients what we have previously demonstrated in primary tumor cells and in vitro studies – that there are certain genetic and clinical subtypes of CLL and NHL where inhibition of both Syk and JAK by Cerdulatinib may provide a clinical benefit. The Phase 1 study is ongoing as the maximum tolerated dose of Cerdulatinib has not been reached. We anticipate that we will begin enrolling patients during 2015. Depending on the overall results of the study, we would expect to further study Cerdulatinib in CLL and/or NHL either alone or in combination with other approved products or with other drugs in development.

Selective Syk inhibitors

We have entered into a collaboration agreement with Biogen Idec, pursuant to which Biogen Idec is leading the development and commercialization of selective Syk inhibitors for inflammatory disorders. Biogen Idec is currently conducting preclinical evaluation of highly selective Syk inhibitors for allergic asthma and other inflammatory disorders such as rheumatoid arthritis.

Allergic asthma

Allergic asthma is a chronic inflammatory disorder of the lungs and respiratory passages that arises from a response to an allergen or pathogen. Asthma affects the lower respiratory tract and is marked by episodic flare-ups, or attacks, that can be life threatening. In patients with this disorder, allergens, such as pollen, bind to and trigger cross-linking of the IgE/Fc receptor complexes on the surface of mast cells. This results in the initiation of a cascade of intracellular signals to mount an immune response resulting in swelling and inflammation of the airways. When this process occurs repeatedly over time, it creates persistent inflammation of the upper and lower airway passages, resulting in the chronic congestion and airway obstruction associated with allergic rhinitis and asthma, respectively. Syk selective inhibitors are designed to bind to Syk in mast cells to interrupt the signal from the IgE/Fc receptor complex, potentially inhibiting the immune response to the allergen in a way that may be effective in both the short and long-term control of allergic asthma.

Elinogrel — P2Y12 receptor inhibitor

Our product candidate Elinogrel is an oral and intravenous, competitive and reversible inhibitor of the P2Y12 platelet receptor. Products that block P2Y12, such as clopidogrel, prasugrel and ticagrelor, are indicated to reduce myocardial infarction, stroke and death in patients at high risk of a myocardial infarction. The current agents have a number of limitations that reduce efficacy or decrease safety, such as slow onset, lack of reversibility, lack of intravenous delivery and non-competitive mechanism of action. Elinogrel has been studied in two Phase 2 studies and was previously partnered with Novartis Pharma A.G., or Novartis. We re-acquired full development and commercial rights to the program from Novartis in 2012. We are not currently pursuing development of Elinogrel due to the expense of the large Phase 3 studies needed for approval in current indications, however, we may pursue development of Elinogrel in smaller indications or with a partner in the future.

Sales and marketing

Assuming Betrixaban and Andexanet alfa are approved by the FDA and other regulatory authorities, we intend to commercialize both molecules using a hospital-based sales force in the United States, and possibly marketing in other major markets. To achieve global commercialization, we anticipate using a variety of distribution agreements and commercial partnerships in those territories where we do not establish a sales force. We expect to target our U.S. sales and marketing efforts at the approximately 1,500 hospitals and out-patient acute care settings that would account for the large majority of the prescribing base for our product candidates, if approved. We plan to commercialize both of our thrombosis product candidates in the U.S. with a hospital-based sales force of approximately 125 to 150 sales representatives. We expect that our commercial infrastructure would be comprised of several proven, experienced marketing and sales management professionals along with a reimbursement support and hospital formulary specialist team. In addition, we intend to develop and publish health economic models demonstrating the value of Betrixaban and Andexanet alfa to hospital administrators and third party payors.

Research and development

We invest significant effort defining and refining our research and development process and internally teaching our approach to drug development. We favor programs with early decision points, well-validated targets, predictive preclinical models and clear paths to regulatory approval, all in the context of a target product profile that can address significant unmet or underserved clinical needs. Members of our discovery, research and development team have played central roles in discovering and developing a number of promising candidates over the past 20 plus years while at Portola, and while at Millennium Pharmaceuticals, Inc., or Millennium, and COR Therapeutics, Inc., two early developers of thrombosis therapies. They have used unique biological insights to develop in vitro and in vivo models that speed development. We also selectively leverage outside collaborators to expand into potential additional indications. As our product candidates progress through clinical development, we have focused and will increasingly focus our scientific efforts on supporting that development.

We emphasize data-driven decision making, strive to advance or terminate projects early based on clearly defined go/no go criteria, prioritize programs at all stages and allocate our capital to the most promising programs. Our current development-stage portfolio consists of three compounds discovered through our internal research efforts and one discovered by Portola scientists during their time at a prior company. In addition we are actively seeking to identify attractive external opportunities. We utilize the same critical filters for investment when evaluating external programs as we do with our own, internally-derived candidates.

Collaboration and license agreements

Betrixaban

Millennium agreements

In November 2003, we entered into an asset purchase agreement to acquire patent rights and intellectual property to an ADP Receptor Antagonist Program, or the ADP Program, and a Platelet Research Program from Millennium. We are obligated to pay to Millennium royalties at tiered single-digit percentages of net sales of certain ADP Program products if product sales are ever achieved, which royalty payments will continue until the expiration of the relevant patents or ten years after launch, whichever is later.

In August 2004, we entered into an agreement to license from Millennium certain exclusive rights to research, develop and commercialize certain compounds that inhibit Factor Xa, including Betrixaban, or the Factor Xa Program. The license agreement requires us to make certain license fee, milestone, royalty and sublicense sharing payments to Millennium as we develop, commercialize or sublicense Betrixaban and other products from the Factor Xa Program. The Millennium license agreement further provides for additional payments to Millennium of up to $35.0 million based on the achievement of regulatory filing and approval milestones related to the Factor Xa Program. In addition, we are obligated to pay Millennium royalties at tiered single-digit percentages of net sales of any Factor Xa Program products if product sales are ever achieved. This license agreement will continue in force, on a product-by-product and country-by-country basis, until the expiration of the relevant patents or ten years after the launch, whichever is later, or termination by either party pursuant to the agreement. This license agreement may be terminated by either party for the other party's uncured material breach. In addition, we may terminate this agreement for convenience with 30 days' advance written notice.

In December 2005, we amended both the asset purchase agreement for the ADP Program and the license agreement for the Factor Xa Program. In connection with this amendment, we have made aggregate cash payments to Millennium of $6.0 million and issued to Millennium equity securities with an aggregate value of $1.8 million through December 31, 2014.

Lee's agreement

In January 2013, we entered into a clinical collaboration agreement with Lee's to jointly expand our Phase 3 APEX study of Betrixaban into China. Under the agreement, Lee's provided us with an upfront and non-refundable payment of $700,000 and will reimburse our costs in connection with the study to support the expansion of the APEX study into China. Lee's will also lead regulatory interactions with China's State Food and Drug Administration for the study. We granted Lee's an exclusive option to negotiate for the exclusive commercial rights to Betrixaban in China, which may be exercised by Lee's for 60 days after it receives the primary data analysis report from the study. We may, at any time prior to the unblinding of the APEX study data, terminate the option and the agreement by providing Lee's with written notification and making a termination payment. We reserved the right to terminate Lee's option under certain specified circumstances. If the parties fail to reach agreement on the terms of the commercial rights and we commercialize Betrixaban in China ourselves or grant a third party the right to do so, or if we terminate Lee's option under the agreement, we are required to make certain payments to Lee's.

Unless earlier terminated, this agreement will continue until superseded by the execution of the agreement that grants to Lee's the commercial rights to Betrixaban in China. This agreement may be terminated by Lee's for convenience with 90 days' advance written notice, or by either party for the other party's uncured material breach or any material safety issue of Betrixaban. In addition, this agreement will automatically terminate if we fail to reach agreement to grant Lee's the commercial rights to Betrixaban in China, or if we terminate Lee's option.

Andexanet alfa

BMS and Pfizer agreements

In October 2012, we entered into a collaboration agreement with BMS and Pfizer, to include subjects dosed with apixaban, their jointly owned product candidate, in one of our Phase 2 proof-of-concept studies of Andexanet alfa. We are responsible for the cost of conducting such clinical studies. This agreement will continue in force until the completion of the studies or termination by either party pursuant to the agreement.

In January 2014, we entered into a second collaboration agreement with BMS and Pfizer to further study the safety and efficacy of Andexanet alfa as a reversal agent to apixaban through our ongoing Phase 3 studies. Under the terms of the Phase 3 agreement, we received an upfront payment of $13.0 million and are eligible to receive additional development and regulatory milestone payments of up to $12.0 million. These payments represent the total consideration under this agreement. BMS and Pfizer will continue to provide development and regulatory guidance for the program.

This Phase 3 collaboration agreement will continue in force until the approval of Andexanet alfa as a reversal agent for apixaban by the FDA and EMA. BMS and Pfizer may terminate this agreement for convenience with 60 days' advance written notice or for our bankruptcy or change of control. In addition, either party may terminate this agreement for the other party's uncured material breach, material safety issues, or failure of the Phase 3 studies.

Under both agreements with BMS and Pfizer, we retain full, worldwide development and commercial rights to Andexanet alfa.

Bayer and Janssen agreements

In February 2013, we entered into a clinical collaboration agreement with Bayer and Janssen to include subjects dosed with rivaroxaban, their Factor Xa inhibitor product, in one of our Phase 2 proof-of-concept studies of Andexanet alfa. We are responsible for the cost of conducting such clinical studies. This agreement will continue in force until the later of the completion of the studies and the fulfillment of certain other conditions set forth in the agreement, unless earlier terminated by either party pursuant to the agreement.

In January 2014, we entered into a second collaboration agreement with Bayer and Janssen to further study the safety and efficacy of Andexanet alfa as a reversal agent to rivaroxaban through our ongoing Phase 3 studies. Our original collaboration agreement with Bayer and Janssen covers the conduct of a Phase 2 proof-of-concept study. The second collaboration agreement covers the conduct of Phase 3 studies of Andexanet alfa with rivaroxaban and any potential U.S. and EU regulatory approval of Andexanet alfa as reversal agent of rivaroxaban. Under this Phase 3 collaboration agreement, we received an upfront payment of $10 million and are eligible to receive additional development and regulatory milestone payments of up to $15.0 million. These payments represent the total consideration under this agreement. Bayer and Janssen will continue to provide development and regulatory guidance for the program.

This Phase 3 collaboration agreement will continue in force until the approval of Andexanet alfa as a reversal agent for rivaroxaban by the FDA and EMA. Bayer and Janssen may terminate this agreement for convenience with 60 days' advance written notice or for our bankruptcy or change of control. In addition, either party may terminate this agreement for the other party's uncured material breach or material safety issues or we can also terminate this agreement for failure of the Phase 3 studies.

Under both agreements with Bayer and Janssen, we retain full, worldwide development and commercial rights to Andexanet alfa.

Daiichi Sankyo agreement

In June 2013, we entered into an agreement with Daiichi Sankyo to include subjects dosed with edoxaban, their Factor Xa inhibitor product, in one of our proof-of-concept studies of Andexanet alfa. We are responsible for the costs of conducting this clinical study. This agreement will continue in force until the later of the completion of the studies and the fulfillment of certain other conditions set forth in the agreement, unless earlier terminated by either party pursuant to the agreement. This agreement does not grant Daiichi Sankyo any other rights with respect to the development or commercialization of Andexanet alfa.

In July 2014, we entered into a second collaboration agreement with Daiichi Sankyo to further study the safety and efficacy of Andexanet alfa as a reversal agent to edoxaban through Phase 3 studies. The second collaboration agreement covers the conduct of Phase 3 studies of Andexanet alfa with edoxaban and any potential U.S. and EU regulatory approval of Andexanet alfa as a reversal agent for edoxaban. Under this Phase 3 collaboration agreement we received an upfront payment of $15.0 million and are eligible to receive additional development and regulatory milestone payments of up to $25.0 million. These payments represent the total consideration under this agreement. Daiichi Sankyo will continue to provide development and regulatory guidance for the program.

This Phase 3 collaboration agreement will continue in force until the approval of Andexanet alfa as a reversal agent for edoxaban by the FDA and EMA. Daiichi Sankyo may terminate this agreement for convenience with 60 days' advance written notice or for our bankruptcy or change of control. In addition, either party may terminate this agreement for the other party's uncured material breach or material safety issues, and we can also terminate this agreement for failure of the Phase 3 studies.

Under both agreements with Daiichi Sankyo, we retain full, worldwide development and commercial rights to Andexanet alfa.

Syk Selective Inhibitors

Biogen Idec agreement

In October 2011, we entered into an exclusive worldwide license and collaboration agreement with Biogen Idec to develop and commercialize PRT2607 and certain highly selective Syk inhibitors. Biogen Idec made an upfront cash payment to us of $36.0 million and purchased 636,042 shares of our Series 1 convertible preferred stock for an aggregate purchase price of $9.0 million. Pursuant to the agreement, we had an option to lead development and commercialization efforts in the United States for select smaller indications, as well as discovery efforts for follow-on Syk inhibitors and an option to co-promote the drug alongside Biogen Idec with major indications in the United States. In November 2012, we elected to exercise our option to convert the agreement to a fully out-licensed agreement. After such election, we relinquished our right to share profits from sales of products related to Syk inhibitors, but are entitled to receive tiered royalties at low-double-digit percentages (not greater than 20%) from sales of these products by Biogen Idec if product sales are ever achieved. We no longer have an obligation to fund the program under the agreement. The agreement also provides for additional payments to us of up to approximately $370 million based on the occurrence of certain development and regulatory events. Biogen Idec has elected to assume all future development work for Syk inhibitors, including the major indications, such as rheumatoid arthritis and allergic asthma. To date, no development or regulatory events provided by the agreement have occurred and no royalties have been triggered under our agreement with Biogen Idec. This agreement will continue in force until either party terminates the agreement pursuant to the agreement or until the expiration of Biogen Idec's royalty obligations pursuant to the agreement, which is the later of the expiration of all relevant patents and regulatory exclusivities or 10 years after first commercial sale. Biogen Idec may terminate the agreement without cause upon 120 days' written notice or for cause if Portola commits a material breach of its obligations under the agreement and fails to cure the breach. We may terminate the agreement with proper written notice for cause if Biogen Idec commits a material breach of its obligations under the agreement and fails to cure the breach for 90 days (or 60 days for nonpayment of an amount due) after written notice is given, if Biogen Idec commences a legal action challenging the validity, enforceability or scope of any of the patents subject to the agreement or in the event of bankruptcy, reorganization, liquidation or receivership of Biogen Idec. In such event, we would regain all development rights and Biogen Idec would have no further payment obligations pursuant to the agreement.

Astellas agreement

In June 2005, we entered into an agreement to license certain exclusive rights to research, develop and commercialize Syk inhibitors from Astellas Pharma, Inc., or Astellas, which agreement was subsequently amended and restated in December 2010. The agreement with Astellas, as amended, requires us to make certain milestone, royalty and sublicense revenue sharing payments to Astellas as we develop, commercialize or sublicense Syk inhibitors. Pursuant to our agreement with Astellas, we made cash milestone payments to Astellas of $500,000 in May 2005, $500,000 in May 2006 and $1.0 million in December 2008, as we elected to continue our development of Syk inhibitors. In addition, for each Syk inhibitor product, we may be required to make up to $71.5 million in additional milestone payments to Astellas if the product is approved for multiple distinct indications in the United States, Europe and Japan and the product attains certain sales levels. If we grant a sublicense to develop and commercialize Syk inhibitors, we are required to pay Astellas 20% of any payments (excluding royalties) received under the sublicense agreement. In 2011, in connection with our receipt of the upfront payment under our agreement with Biogen Idec, we made a cash payment to Astellas of $7.2 million. In addition, we are required to pay Astellas royalties at low single-digit percentages for worldwide sales for any Syk inhibitor product made by us or our sublicensees. This agreement will continue in force, on a product-by-product and country-by-country basis, until the expiration of relevant patents or ten years after the launch, whichever is later, or termination by either party pursuant to the agreement. The agreement may be terminated by us for convenience upon 60 days' written notice to Astellas or immediately upon written notice if all major claims of all of the patents covered by the agreement are invalidated by competent judicial or administrative authorities in the U.S. and no measure has been taken to appeal the invalidation. Either party may terminate the agreement upon written notice if the other party is in material breach of its obligations under the agreement for reasons within its control and responsibility and has not remedied the breach within 30 days of receiving written notice or in the event of bankruptcy, liquidation or receivership of the other party.

Cerdulatinib

Aciex agreement (Nicox)

In February 2013, we entered into a license and collaboration agreement with Aciex Therapeutics, Inc., or Aciex, pursuant to which we granted Aciex an exclusive license to co-develop and co-commercialize Cerdulatinib and certain related compounds for nonsystemic indications, such as the treatment and prevention of ophthalmological diseases by topical administration and allergic rhinitis by intranasal administration. In April 2014, this agreement was amended to release all rights for Cerdulatinib to us. The collaboration is now focused on development of other related compounds for topical ophthalmic indications. Under the agreement, we will share development costs with Aciex and be entitled to receive either a share of the profits generated by any eventual products or royalty payments. We retain rights to other indications, including dermatologic disorders.

Manufacturing and clinical research agreements

CMC Biologics manufacturing agreement

In July 2014, we entered into an agreement with CMC ICOS Biologics, Inc., or CMC Biologics, a subsidiary of CMC Biologics S.à.r.l., a privately-held contract manufacturing organization, pursuant to which CMC Biologics will manufacture clinical and commercial supply of Andexanet alfa and perform pre-validation and validation work on our behalf. Andexanet alfa used in our clinical studies is currently produced for us by CMC Biologics, who will also support our initial BLA submission and initial commercial launch in the U.S.

Under the agreement, we are required to purchase an aggregate fixed number of batches of Andexanet alfa from CMC Biologics beginning in 2015 through 2021. Total batch commitments under the agreement can be increased or decreased based on the achievement of milestones relating to the regulatory approval process for Andexanet alfa, expansion of existing manufacturing capacity and operational qualification of CMC Biologics' manufacturing facilities. We made an upfront payment to CMC Biologics in the amount of $10.0 million in July 2014 and made a reservation payment to CMC Biologics of $4.6 million in November 2014. Both payments will be credited against our future purchases of batches under the agreement.

Total fixed commitments under the agreement for the purchases of clinical and commercial batches, not taking into account possible price and batch adjustments per the terms of the agreement, are approximately $293.9 million. CMC Biologics also conducts pre-validation and validation work pursuant to work orders under the arrangement.

The term of the agreement is seven years and may be early terminated by either party for the other party's uncured material breach or insolvency. We may also terminate the agreement if CMC Biologics is unable to add additional manufacturing capacity on a timely basis, if certain manufacturing-related regulatory events do not occur before certain deadlines, or if the batch yield is below a certain threshold, in which case we are not obligated to pay CMC Biologics a termination payment and CMC Biologics will be obligated to refund the uncredited amounts of the upfront payment and reservation payment. In addition, we may terminate the agreement unilaterally if we discontinue the development and commercialization of Andexanet alfa for regulatory, safety, efficacy or other commercial reasons, or if the projected market demand or gross margin of Andexanet alfa is below a minimum threshold. A termination agreement under these provisions will obligate us to pay CMC Biologics a termination fee between $5.0 million and $30.0 million, depending on the date of termination. The termination fee is highest from 2015 through 2017, and then decreases through 2021. Any remaining upfront payments or reservation payments we have made, not yet credited against the purchase of batches, at the time of termination will be applied against the termination fee.

Lonza manufacturing agreement

We do not anticipate that supply from CMC Biologics, even as expanded, will be sufficient to meet projected worldwide demand for Andexanet alfa, therefore, we are developing an improved and more cost-effective process at Lonza Group Ltd, or Lonza. In June 2013, we signed an agreement with Lonza to develop a commercial-scale manufacturing process for Andexanet alfa. However, the first commercial material from Lonza will not become available until after our expected U.S. launch. In 2014 we completed our first 10,000 liter scale engineering batch with Lonza. The run successfully produced bulk drug substance that met our specifications and it appeared highly comparable to previously manufactured material. However, the yield was lower than we expected and we determined that the timeline needed to improve product yield at Lonza would result in a significant delay to our BLA submission on our intended timeline. As a result, our BLA submission will use material from our ongoing CMC Biologics manufacturing process at an expanded production facility being constructed at CMC Biologics. Our broader worldwide commercial supply of Andexanet alfa is still expected to be manufactured by Lonza using what we anticipate will be an improved and more cost-effective process, with the first commercial material from Lonza becoming available following our U.S. launch.

In October 2014, we entered into a new commercial manufacturing agreement with Lonza, replacing the 2013 agreement, to produce commercial quantities of Andexanet alfa and perform pre-validation and validation work on our behalf following our U.S. launch.

Under this new agreement, we are required to purchase at least seven commercial batches of Andexanet alfa per year from Lonza, over a period of five years following first regulatory approval of the product from Lonza's facility. We may cancel these orders upon written notice to Lonza, in which case, we will be obligated to pay a cancellation fee ranging from between €10.0 million (or $12.2 million based on the exchange rate as of December 31, 2014) and €13.3 million (or $16.2 million based on the exchange rate as of December 31, 2014), depending on the time of cancellation and any applicable costs related to raw materials and certain pass-through costs.

The agreement will terminate on the fifth anniversary of the date of the first regulatory approval and may be early terminated by either party for the other party's uncured material breach or insolvency or, prior to the first regulatory approval for any reason on not less than twelve months prior written notice. In addition, we may also terminate the agreement if we discontinue the development or commercialization of Andexanet alfa for regulatory, safety, efficacy or other commercial reasons and for technical reasons after delivery of the first engineering batch but before delivery of the second engineering batch. In such circumstance we will be obligated to pay a termination payment ranging from between €10.0 million (or $12.2 million based on the exchange rate as of December 31, 2014) and €15.0 million (or $18.3 million based on the exchange rate as of December 31, 2014), depending on the time of termination, which includes the cancellation fee, and any applicable costs related to raw materials.

PPD development agreement

In January 2012, we entered into a master contract services agreement with PPD Development, LP, or PPD, under which PPD provides administrative, data management and statistical analysis services relating to our APEX study. Pursuant to this agreement as amended, PPD is responsible for overseeing and managing the conduct of the APEX study in Latin America. We will remain ultimately responsible for the study and have separate agreements with the sites performing the study, other clinical research organizations and other third party vendors. This agreement will remain in effect until the later of three years after its effective date or the completion of services by PPD. Portola may terminate the agreement with 30 days' notice or immediately upon a material breach of the agreement by PPD that cannot be cured. PPD may terminate the agreement immediately upon a material breach of the agreement by us that cannot be cured or, 30 days after giving notice of a curable material breach of the agreement by us, if we have not cured such breach.

Hovione manufacturing agreement

In January 2007, we entered into a development and manufacturing service agreement with Hovione Inter Limited, or Hovione, as amended on February 1, 2013, pursuant to which Hovione is producing the active pharmaceutical ingredient, or API, for Betrixaban for use in our APEX study. Under the agreement, Hovione produces the API using our proprietary process and to our specified quality standards and in compliance with applicable regulations. Hovione produces the API pursuant to work orders submitted by us and agreed to by Hovione, though Hovione is not under any obligation to enter into any work order. The agreement remains in effect until the later of seven years after its effective date or the completion of any outstanding work orders. The agreement may be extended continuously for additional two-year periods upon agreement of the parties. We may terminate the agreement for convenience with 60 days' written notice and either party may terminate the agreement with 60 days' written notice upon the bankruptcy of the other party, the failure of the other party to cure a material breach of the agreement within 30 days of receiving notice of such breach, the occurrence of events that prevents the other party from performing its obligations or if either party determines that the agreement is detrimental to its interests and can demonstrate that it would be in the best interests of both parties to terminate the agreement.

Competition

Our industry is highly competitive and subject to rapid and significant technological change. While we believe that our development experience and scientific knowledge provide us with competitive advantages, we may face competition from large pharmaceutical and biotechnology companies, smaller pharmaceutical and biotechnology companies, specialty pharmaceutical companies, generic drug companies, academic institutions, government agencies and research institutions and others.

Many of our competitors may have significantly greater financial, technical and human resources than we have. Mergers and acquisitions in the pharmaceutical and biotechnology industries may result in even more resources being concentrated among a smaller number of our competitors. Our commercial opportunity could be reduced or eliminated if our competitors develop or market products or other novel technologies that are more effective, safer or less costly than any that will be commercialized by us, or obtain regulatory approval for their products more rapidly than we may obtain approval for ours. Our success will be based in part on our ability to identify, develop and manage a portfolio of drugs that are safer, more efficacious and/or more cost-effective than alternative therapies.

Betrixaban

In the market for VTE prophylaxis in acute medically ill patients, Betrixaban, if approved, will compete with enoxaparin, which is marketed as Lovenox by Sanofi-Aventis U.S. LLC and as a generic pharmaceutical by several manufacturers, and to a lesser extent with other low molecular weight heparins. In addition, Betrixaban may face competition in the market for acute medically ill patients from other Factor Xa inhibitors including apixaban, which is marketed by BMS and Pfizer, edoxaban, which is marketed by Daiichi Sankyo, rivaroxaban, which is marketed by Bayer and Janssen, and the direct thrombin inhibitor dabigatran, which is marketed by Boehringer Ingelheim GbmH, although none of these molecules is currently approved for use in that population. We believe, that in light of the significant opportunity in this acute medically ill population, one of these agents will likely be tested in a Phase 3 study. For example, in 2014, Janssen announced that it had initiated a Phase 3 study designed to evaluate the efficacy and safety of rivaroxaban to reduce the risk of deep vein thrombosis, or DVT, and pulmonary embolism, or PE, due to a concurrent medical illness for up to 45 days after hospital discharge. As the dosing regimen for an anticoagulant typically varies based on the indication in which it is used and anticoagulants often work in one indication but not another, we and our clinical advisors think it is unlikely that a significant number of physicians will choose to prescribe a Factor Xa inhibitor in the acute medically ill patient population absent a relevant regulatory approval or clinical evidence supporting its use. In the future, owners of approved direct Factor Xa or thrombin inhibitors may decide to develop them for VTE prophylaxis in the acute medically ill patient population although nothing is in development for that indication to our knowledge. In addition, they or other competitors may decide to develop new therapies for VTE prophylaxis in acute medically ill patients.

Andexanet alfa

Currently there are no therapies approved as antidotes for Factor Xa inhibitors. However, Andexanet alfa, if approved, may compete with currently approved treatments designed to enhance coagulation including fresh frozen plasma, prothrombin complex concentrates, rFVIIa, Vitamin K, protamine or whole blood. In addition, several companies have conducted clinical research on compounds that are intended to reverse the effects of one or more direct Factor Xa inhibitors and which, if developed, may be competitive with Andexanet alfa. One of these companies, Perosphere Inc., is in Phase 2 clinical development of its compound.

Cerdulatinib

In the market for the treatment of CLL and NHL, Cerdulatinib, if approved, will compete with existing therapies, such as rituximab, and obinutuzumab which are marketed by Chugai Pharmaceutical Co., F. Hoffmann-LaRoche Ltd. and Genentech, Inc., ibrutinib, which is marketed by Janssen and Pharmacyclics, Inc. idelalisib, which is marketed by Gilead; and potentially other therapies currently in development by a number of different companies.

Syk Selective Inhibitors

In the market for treatment of allergic asthma, the Syk selective inhibitors, if approved, will compete with existing products, such as inhaled corticosteroids, leukotriene modifiers and long-acting beta agonists and potentially with other products currently in development by a number of different companies.

Intellectual property

Our success will significantly depend upon our ability to obtain and maintain patent and other intellectual property and proprietary protection for our drug candidates, including composition-of-matter, dosage and formulation patents, as well as patent and other intellectual property and proprietary protection for our novel biological discoveries and other important technology inventions and know-how. In addition to patents, we rely upon unpatented trade secrets, know-how, and continuing technological innovation to develop and maintain our competitive position. We protect our proprietary information, in part, using confidentiality agreements with our commercial partners, collaborators, employees and consultants and invention assignment agreements with our employees. We also have confidentiality agreements or invention assignment agreements with our commercial partners and selected consultants. Despite these measures, any of our intellectual property and proprietary rights could be challenged, invalidated, circumvented, infringed or misappropriated, or such intellectual property and proprietary rights may not be sufficient to permit us to take advantage of current market trends or otherwise to provide competitive advantages. For more information, please see “Risk factors—Risks related to intellectual property.”

As of December 31, 2014, we owned 29 issued U.S. patents, 37 U.S. patent applications and 133 issued patents and 199 patent applications in other jurisdictions. We also co-owned 11 additional patents and patent applications. In addition, as of December 31, 2014, we have licensed 186 issued patents and 46 patent applications from third parties, mostly on an exclusive basis. The patent portfolios for our leading product candidates as of December 31, 2014 are summarized below:

Betrixaban

Our Betrixaban patent portfolio includes 16 issued U.S. patents and 10 U.S. patent applications covering the composition of and methods of making and using Betrixaban or its analogs, including those owned by us and those licensed from Millennium. The U.S. issued patents relating to the composition of matter of Betrixaban are not due to expire before September 2020 and may be extended up to September 2025, if Betrixaban receives regulatory approval and if the necessary eligibility requirements are met, pursuant to the Drug Price Competition and Patent Term Restoration Act of 1984, commonly referred to as the Hatch-Waxman Act. Betrixaban may also be eligible for an additional six months of pediatric exclusivity under the Best Pharmaceuticals for Children Act as described below. Related international patent applications have issued or been allowed in 35 countries and are pending in Europe and a number of other countries. These international patents and patent applications, if issued, would not be due to expire before September 2020.

In the United States, the Hatch-Waxman Act permits a patent term extension of up to five years for one patent related to an approved therapy. The length of the extension is based upon the period of time the therapy has been under regulatory review. We believe that, if Betrixaban is approved, we will be eligible for a full five year patent term extension for one patent relating to Betrixaban.

In addition, in the United States, the Best Pharmaceuticals for Children Act provides that the period of patent exclusivity for a drug may be extended for six months if the owner of the drug conducts studies of the drug in children pursuant to a request from the FDA. We believe that there may be pediatric applications for Betrixaban and, therefore, that it may be possible for us to obtain an additional six months of pediatric exclusivity of Betrixaban by conducting FDA-requested studies in children.

Andexanet alfa

Our Factor Xa inhibitor antidote patent portfolio is wholly owned by us and includes five issued U.S. patents and 13 U.S. patent applications covering the composition of and methods of making and using Andexanet alfa or its analogs.

The U.S. issued patents are not due to expire before June 2030. A related international patent application has issued in Australia, New Zealand, China, Japan and Mexico, another related international patent application has issued in New Zealand, Mexico and Singapore and international patent applications are pending in Europe and a number of other countries. These international patents and patent applications, if issued, would not be due to expire before September 2028.

Cerdulatinib

Our dual Syk-JAK inhibitor patent portfolio is owned in part by us and licensed in part from Astellas and includes four issued U.S. patents covering the composition of and methods of making and using Cerdulatinib or its analogs. The last to expire of the U.S. patents is not expected to expire before July 2029. Related international patent applications have issued or been allowed in 16 countries and are pending in Europe and a number of other countries. These international patents and patent applications, if issued, would not be due to expire before April 2029.

Syk Selective Inhibitors

Our Syk-specific inhibitor patent portfolio is owned by us and includes five issued U.S. patents covering the composition of and methods of making and using PRT2607 or its analogs. The last to expire of the U.S. patents is currently expected to expire in July 2029. Related international patent applications have issued or been allowed in five countries and are pending in Europe and a number of other countries. These international patents and patent applications, if issued, would not be due to expire before April 2029.

Manufacturing

We rely on contract manufacturing organizations, or CMOs, to produce our drug candidates in accordance with the FDA's and EMA's current Good Manufacturing Practices, or cGMP, regulations for use in our clinical studies. The manufacture of pharmaceuticals is subject to extensive cGMP regulations, which impose various procedural and documentation requirements and govern all areas of record keeping, production processes and controls, personnel and quality control. Our small molecule drug candidates, Betrixaban, Cerdulatinib and PRT2607, are manufactured using common chemical engineering and synthetic processes from readily available raw materials. We rely on Hovione to produce API for Betrixaban for our APEX study. Pursuant to a development and manufacturing service agreement between us and Hovione, Hovione produces the API for Betrixaban using our proprietary process and to our specified quality standards and in compliance with applicable regulations. Hovione produces the API pursuant to work orders submitted by us and agreed to by Hovione, though Hovione is not under any obligation to enter into any work order and may terminate the agreement under certain conditions. Andexanet alfa is a recombinant biologic molecule produced in living cells, a process that is inherently complex and requires specialized knowledge and extensive process optimization and product characterization to transform laboratory scale processes into reproducible commercial manufacturing processes. We have signed a development and manufacturing service agreement with CMC Biologics and Lonza and who are both currently working on multiple strategies to develop an economical, commercial scale production process for Andexanet alfa. Pursuant to these agreements, CMC Biologics and Lonza will each develop a full commercial scale manufacturing process for Andexanet alfa and produce approval enabling validation lots.

We currently have no plans to build our own clinical or commercial scale manufacturing capabilities. To meet our projected needs for clinical supplies to support our activities through regulatory approval and commercial manufacturing, the CMOs with whom we currently work will need to increase scale of production or we will need to secure alternate suppliers. We believe that there are multiple potential sources for our contract manufacturing, but we have not engaged alternate suppliers in the event that our current CMOs are unable to scale production. Our relationships with CMOs are managed by internal personnel with extensive experience in pharmaceutical development and manufacturing.

If we are unable to obtain sufficient quantities of drug candidates or receive raw materials in a timely manner, we could be required to delay our ongoing clinical studies and seek alternative manufacturers, which would be costly and time-consuming.

Government regulation

The FDA and comparable regulatory agencies in state and local jurisdictions and in foreign countries impose substantial requirements upon the clinical development, manufacture and marketing of pharmaceutical products. These agencies and other federal, state and local entities regulate research and development activities and the testing, manufacture, quality control, safety, effectiveness, labeling, storage, record keeping, approval, advertising and promotion of our products.

The process required by the FDA before product candidates may be marketed in the United States generally involves the following:

- nonclinical laboratory and animal testing of the product including some that must be conducted in accordance with Good Laboratory Practices or GLPs;
- submission of an investigational new drug application, or IND, which must become effective before human clinical trials may begin;
- adequate and well-controlled human clinical trials to establish the safety and efficacy of the proposed drug candidate for its intended use;
- pre-approval inspection of manufacturing facilities and selected clinical investigators for their compliance with Good Manufacturing Practices, or GMP, and Good Clinical Practices or GCPs; and
- Approval of an NDA, for a drug or a BLA, for a biologic prior to commercial marketing for specific indications for use.

The testing and approval process requires substantial time, effort and financial resources. Prior to commencing the first clinical trial with a product candidate, we must submit an IND to the FDA. The IND automatically becomes effective 30 days after receipt by the FDA, unless the FDA, within the 30-day time period, raises concerns about the supporting safety data or questions about the design of the clinical trial and imposes a clinical hold. In such a case, the IND sponsor and the FDA must resolve any outstanding concerns before the clinical trial can begin. Submission of an IND may not result in FDA authorization to commence a clinical trial. A separate submission to the existing IND must be made for each successive clinical trial conducted during product development. Further, an independent institutional review board for each medical center proposing to conduct the clinical trial must review and approve the plan for any clinical trial and its informed consent form before the clinical trial commences at that center. Regulatory authorities or an institutional review board or the sponsor may suspend a clinical trial at any time on various grounds, including a finding that the subjects or patients are being exposed to an unacceptable health risk. Some studies also include an Independent Data Monitoring Committee, or IDMC, which receives special access to unblinded data during the clinical trial and may halt the clinical trial if it determines that there is an unacceptable safety risk for subjects or other grounds, such as no demonstration of efficacy. The IDMC may halt a trial if it feels that the data demonstrate efficacy of the drug and it is no longer ethical to withhold the drug from patients in the control arm of the study.

For purposes of NDA or BLA approval, human clinical trials are typically conducted in three sequential phases that may overlap.

- Phase 1 – Studies are initially conducted to test the product candidate for safety, dosage tolerance, absorption, metabolism, distribution and excretion in healthy volunteers or patients.

- Phase 2 – Studies are conducted with groups of patients with a specified disease or condition to provide enough data to evaluate the preliminary efficacy, optimal dosages and dosing schedule and expanded evidence of safety. Multiple Phase 2 clinical trials may be conducted to obtain information prior to beginning larger and more expensive Phase 3 clinical trials.

- Phase 3 – Phase 3 clinical trials are undertaken in large patient populations to further evaluate dosage, to provide statistically significant evidence of clinical efficacy and to further test for safety in an expanded patient population at multiple clinical trial sites. These clinical trials are intended to establish the overall risk/benefit ratio of the product compared to placebo or current standard of care and provide an adequate basis for product labeling. These trials may be done globally to support global registrations.

- The FDA may require, or companies may pursue, additional clinical trials after a product is approved. These so-called Phase 4 studies may be made a condition to be satisfied after approval. The results of Phase 4 studies can confirm the effectiveness of a product candidate and can provide important safety information gathered in routine medical practice.

Concurrent with clinical trials, companies usually complete additional animal studies and must also develop additional information about the chemistry and physical characteristics of the product candidate 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 product candidate and, among other things, the sponsor must also develop methods for testing the identity, strength, quality and purity of the final product. Additionally, appropriate packaging must be selected and tested and stability studies must be conducted to establish an appropriate shelf life for the product candidate including data demonstrating that the product candidate does not undergo unacceptable deterioration over its shelf life.

NDA or BLA submission and review by the FDA

The results of product development, nonclinical studies and clinical trials are submitted to the FDA as part of an NDA or BLA. The submission of an NDA or BLA requires payment of a substantial User Fee to FDA. The FDA may convene an advisory committee to provide independent expert clinical opinion on application review questions. The FDA reviews applications to determine, among other things, whether a product is safe and effective for its intended use and whether the manufacturing controls are adequate to assure consistent batch to batch purity, identity, potency, and strength of the product candidate. Before approving an NDA or BLA, the FDA will inspect the facility or facilities where the product is manufactured. The FDA will not approve an application unless it determines that the manufacturing processes, equipment and facilities are in compliance with cGMP requirements. Once the NDA submission has been accepted for filing (sixty days post receipt of the application by the FDA), the FDA typically takes ten months to review the application and respond to the applicant, which can take the form of either a Complete Response Letter or Approval. The review process is often significantly extended by FDA requests for additional information or clarification. The FDA may delay or refuse approval of an NDA if applicable regulatory criteria are not satisfied, require additional testing or information and/or require post-marketing testing and surveillance to monitor safety or efficacy of a product. FDA approval of any NDA or BLA submitted by us will be at a time the FDA chooses. Also, if regulatory approval of a product is granted, such approval may entail limitations on the indicated uses for which such product may be marketed and require post-marketing requirements such as a Risk Evaluation and Mitigation Procedure or a Phase 4 study. Once approved, the FDA may withdraw the product approval if compliance with pre- and post-marketing regulatory standards is not maintained or if problems occur after the product reaches the marketplace. In addition, the FDA may require Phase 4 post-marketing studies to monitor the effect of approved products, and may limit further marketing of the product based on the results of these post-marketing studies.

The FDA has a fast track program that is intended to expedite or facilitate the process for reviewing new drugs and biological products that meet certain criteria. Specifically, new drugs and biological products are eligible for fast track designation if they are intended to treat a serious or life-threatening condition and demonstrate the potential to address unmet medical needs for the condition. Fast track designation applies to the combination of the product and the specific indication for which it is being studied. For a fast track product, the FDA may consider review of completed sections of an NDA or BLA on a rolling basis provided the sponsor provides, and the FDA accepts, a schedule for the submission of the completed sections of the NDA or BLA. Under these circumstances, the sponsor pays any required user fees upon submission of the first section of the NDA or BLA. A fast track designated drug candidate may also qualify for priority review, under which the FDA reviews the NDA or BLA in a total of six months rather than ten months after it is accepted for filing.

Post-approval requirements

Any products manufactured or distributed by us pursuant to FDA approvals are subject to continuing regulation by the FDA, including record-keeping requirements and reporting of adverse experiences. Drug and biologic manufacturers and their subcontractors are required to register their establishments with the FDA and certain state agencies, and are subject to periodic unannounced inspections by the FDA and certain state agencies for compliance with GMP, which impose certain procedural and documentation requirements upon us and our third-party manufacturers. We cannot be certain that we or our present or future suppliers will be able to comply with the GMP regulations 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, require us to recall a product from distribution, or withdraw approval of the NDA or BLA.

The FDA closely regulates the marketing and promotion of drugs. A company can make only those claims relating to safety and efficacy, purity and potency that are approved by the FDA. Failure to comply with these requirements can result in adverse publicity, warning letters, corrective advertising and potential civil and criminal penalties. Physicians may prescribe legally available products for uses that are not described in the product's labeling and that differ from those tested by us and approved by the FDA. Such off-label uses are common across medical specialties. Physicians may believe that such off-label uses are the best treatment for many patients in varied circumstances. The FDA does not regulate the behavior of physicians in their choice of treatments. The FDA does, however, restrict manufacturer's communications on the subject of off-label use.

Healthcare and reimbursement regulation

Our sales, promotion, medical education and other activities following product approval will be subject to regulation by numerous regulatory and law enforcement authorities in the United States in addition to FDA, including potentially the Federal Trade Commission, the Department of Justice, the Centers for Medicare and Medicaid Services, other divisions of the Department of Health and Human Services and state and local governments. Our promotional and scientific/educational programs must comply with the anti-kickback provisions of the Social Security Act, the Foreign Corrupt Practices Act, the False Claims Act, the Veterans Health Care Act and similar state laws.

Depending on the circumstances, failure to meet these applicable regulatory requirements can result in criminal prosecution, fines or other penalties, injunctions, recall or seizure of products, total or partial suspension of production, denial or withdrawal of pre-marketing product approvals, private "qui tam" actions brought by individual whistleblowers in the name of the government or refusal to allow us to enter into supply contracts, including government contracts.

Sales of pharmaceutical products depend significantly on the availability of third-party reimbursement. Third-party payors include government health administrative authorities, managed care providers, private health insurers and other organizations. We anticipate third-party payors will provide reimbursement for our products. However, these third-party payors are increasingly challenging the price and examining the cost-effectiveness of medical products and services. In addition, significant uncertainty exists as to the reimbursement status of newly approved healthcare products. We may need to conduct expensive pharmacological studies to demonstrate the cost-effectiveness of our products. The product candidates that we develop may not be considered cost-effective. It is time consuming and expensive for us to seek reimbursement from third-party payors. Reimbursement may not be available or sufficient to allow us to sell our products on a competitive and profitable basis.

The United States and some foreign jurisdictions are considering or have enacted a number of legislative and regulatory proposals to change the healthcare system in ways that could affect our ability to sell our products profitably. 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/or 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.

Foreign regulation

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 products to the extent we choose to develop or sell any products outside of the United States. The approval process varies from country to country and the time may be longer or shorter than that required to obtain FDA approval. The requirements governing the conduct of clinical trials, product licensing, pricing and reimbursement vary greatly from country to country.

EU member states require both regulatory clearances by the national competent authority and a favorable ethics committee opinion prior to the commencement of a clinical trial. Under the EU regulatory systems, we may submit marketing authorization applications either under a centralized or decentralized procedure. The centralized procedure provides for the grant of a single marketing authorization that is valid for all EU member states. The centralized procedure is compulsory for medicines produced by certain biotechnological processes, products with a new active substance indicated for the treatment of certain diseases, such as neurodegenerative disorder or diabetes and products designated as orphan medicinal products and optional for those products which are highly innovative or for which a centralized process is in the interest of patients. The decentralized procedure of approval provides for approval by one or more other, or concerned, member states of an assessment of an application performed by one member state, known as the reference member state. Under the decentralized approval procedure, an applicant submits an application, or dossier, and related materials (draft summary of product characteristics, draft labeling and package leaflet) to the reference member state and concerned member states. The reference member state prepares a draft assessment and drafts of the related materials within 120 days after receipt of a valid application. Within 90 days of receiving the reference member state's assessment report, each concerned member state must decide whether to approve the assessment report and related materials. If a member state cannot approve the assessment report and related materials on the grounds of potential serious risk to public health, the disputed points may eventually be referred to the European Commission, whose decision is binding on all member states.

Employees

As of December 31, 2014, we had 99 full-time employees, 13 of whom hold Ph.D. degrees and 4 of whom hold M.D. degrees. Of the full-time employees, 65 employees are engaged in research and development and 34 are engaged in general administration, business development and marketing. Our employees are not represented by labor unions or covered by collective bargaining agreements. We consider our relationship with our employees to be good.

Facilities

We lease approximately 60,000 square feet of research and office space in South San Francisco, California under a lease that expires in March 2020. Thereafter, at our option, we may extend the term for an additional three years through March 2023. We believe that our existing facilities are sufficient for our current needs for the foreseeable future.

Legal proceedings

We are not currently a party to any material legal proceedings.

Corporate and Available Information

Our principal corporate offices are located at 270 E. Grand Avenue, South San Francisco, California 94080 and our telephone number is (650) 246-7000. We were incorporated in Delaware in September 2003. Our internet address is www.portola.com. We make available on our website, free of charge, our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and any amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission, or the SEC. Our SEC reports can be accessed through the Investors section of our internet website. Further, a copy of this Annual Report on Form 10-K is located at the SEC's Public Reference Rooms at 100 F Street, N.E., Washington, D. C. 20549. Information on the operation of the Public Reference Room can be obtained 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 our filings at http://www.sec.gov. The information found on our internet website is not incorporated by reference into this Annual Report on Form 10-K or any other report we file with or furnish to the SEC.

Item 1A. RISK FACTORS.

Investing in our common stock involves a high degree of risk. You should consider carefully the following risks, together with all the other information in this Annual Report on Form 10-K, including our financial statements and notes thereto, before you invest in our common stock. If any of the following risks actually materializes, our operating results, financial condition and liquidity could be materially adversely affected. As a result, the trading price of our common stock could decline and you could lose part or all of your investment.

RISKS RELATED TO OUR FINANCIAL CONDITION AND NEED FOR ADDITIONAL CAPITAL

Although we reported net income for the year ended December 31, 2012, we have incurred significant losses since 2012, and expect to incur substantial and increasing losses for the foreseeable future.

We are a clinical-stage biopharmaceutical company. We do not currently have any products approved for sale, and we continue to incur significant research and development and general and administrative expenses related to our operations. Although we reported net income for the year ended December 31, 2012, this was primarily due to the recognition of all remaining deferred revenue following the termination of a collaboration agreement. We expect to incur substantial and increasing losses for the foreseeable future. As of December 31, 2014, we had an accumulated deficit of approximately $422.8 million.

To date, we have financed our operations primarily through sales of our equity securities, collaborations, and to a lesser extent, government grants, equipment leases, venture debt and with the benefit of tax credits made available under a federal stimulus program supporting drug development. We have devoted substantially all of our efforts to research and development, including clinical studies, but have not completed development of any product candidates. We anticipate that we will continue to incur substantial expenses as we:

- initiate or continue clinical studies of our three most advanced product candidates;
- continue the research and development of our product candidates;
- seek to discover or in-license additional product candidates;
- seek regulatory approvals for our product candidates that successfully complete clinical studies;
- establish a sales, marketing and distribution infrastructure and scale-up manufacturing capabilities to commercialize products for which we may obtain regulatory approval, including process improvements in order to manufacture Andexanet alfa at commercial scale; and
- enhance operational, compliance, financial and information management systems and hire more personnel, including personnel to support development of our product candidates and support our commercialization efforts.

To be profitable in the future, we must succeed in developing and commercializing products with significant market potential. This will require us to be successful in a range of activities, including advancing our product candidates, completing clinical studies of our product candidates, obtaining regulatory approval for these product candidates and manufacturing, marketing and selling those products for which we may obtain regulatory approval. We are only in the preliminary stages of some of these activities. We may not succeed in these activities and may never generate revenue that is sufficient to be profitable in the future. Even if we are profitable, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our failure to achieve sustained profitability would depress the value of our company and could impair our ability to raise capital, expand our business, diversify our product candidates, market our product candidates, if approved, or continue our operations.

Our operating results may fluctuate significantly, which makes our future operating results difficult to predict and could cause our operating results to fall below expectations or our guidance.

Our quarterly and annual operating results may fluctuate significantly in the future, which makes it difficult for us to predict our future operating results. From time to time, we enter into collaboration agreements with other companies that include development funding and significant upfront and milestone payments, and we expect that amounts earned from our collaboration agreements will continue to be an important source of our revenue. Accordingly, our revenue will depend on development funding and the achievement of development and clinical milestones under our existing collaboration arrangements, as well as any potential future collaboration and license agreements and sales of our products, if approved. These upfront and milestone payments may vary significantly from period to period and any such variance could cause a significant fluctuation in our operating results from one period to the next. Furthermore, our operating results may fluctuate due to a variety of other factors, many of which are outside of our control and may be difficult to predict, including the following:

- the timing and cost of, and level of investment in, research and development activities relating to our product candidates, which may change from time to time;
- the cost of manufacturing our product candidates, which may vary depending on United States Food and Drug Administration, or FDA, guidelines and requirements, the quantity of production, technical challenges and the terms of our agreements with manufacturers;
- expenditures that we will or may incur to acquire or develop additional product candidates and technologies;
- the level of demand for our product candidates, should they receive approval, which may vary significantly;
- future accounting pronouncements or changes in our accounting policies;
- the timing and success or failure of clinical studies for our product candidates or competing product candidates, or any other change in the competitive landscape of our industry, including consolidation among our competitors or partners;
- the risk/benefit profile, cost and reimbursement policies with respect to our products candidates, if approved, and existing and potential future drugs that compete with our product candidates; and
- the changing and volatile global economic environment.

The cumulative effects of these factors could result in large fluctuations and unpredictability in our quarterly and annual operating results. As a result, comparing our operating results on a period-to-period basis may not be meaningful. Investors should not rely on our past results as an indication of our future performance. This variability and unpredictability could also result in our failing to meet the expectations of industry or financial analysts or investors for any period. If our revenue or operating results fall below the expectations of analysts or investors or below any forecasts we may provide to the market, or if the forecasts we provide to the market are below the expectations of analysts or investors, the price of our common stock could decline substantially. Such a stock price decline could occur even when we have met any previously publicly stated revenue or earnings guidance we may provide.

We will need additional funds to support our operations, and such funding may not be available to us on acceptable terms, or at all, which would force us to delay, reduce or suspend our research and development programs and other operations or commercialization efforts. Raising additional capital may subject us to unfavorable terms, cause dilution to our existing stockholders, restrict our operations or require us to relinquish rights to our product candidates and technologies.

We are advancing multiple product candidates through the research and clinical development process. The completion of the development and the potential commercialization of our product candidates, should they receive approval, will require substantial funds. As of December 31, 2014, we had $392.3 million in cash, cash equivalents and investments. We believe that our available cash, cash equivalents and investments will be sufficient to fund our anticipated level of operations for at least the next 12 months. Our future financing requirements will depend on many factors, some of which are beyond our control, including the following:

- the rate of progress and cost of our clinical studies;
- the timing of, and costs involved in, seeking and obtaining approvals from the FDA and other regulatory authorities;
- the costs of commercialization activities if any of our product candidates is approved, including product sales, marketing, manufacturing and distribution;
- the degree and rate of market acceptance of any products launched by us or future partners;
- our ability to enter into additional collaboration, licensing, commercialization or other financing arrangements and the terms and timing of such arrangements; and
- the emergence of competing technologies or other adverse market developments.

Until we can generate a sufficient amount of product revenue to finance our cash requirements, which we may never do, we expect to finance future cash needs through a combination of public or private equity offerings, debt financings, collaborations, strategic alliances, licensing arrangements and other financing, marketing and distribution arrangements. Additional financing may not be available to us when we need it or it may not be available on favorable terms.

If we raise additional capital through financing, marketing and distribution arrangements or other collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish certain valuable rights to our product candidates, technologies, future revenue streams or research programs or grant licenses on terms that may not be favorable to us. If we raise additional capital through public or private equity offerings, the ownership interest of our existing stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect our stockholders' rights. If we raise additional capital through debt financing, we may be subject to covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends. If we are unable to obtain adequate financing when needed, we may have to delay, reduce the scope of, or suspend one or more of our clinical studies, research and development programs or commercialization efforts.

RISKS RELATED TO THE DEVELOPMENT AND COMMERCIALIZATION OF OUR PRODUCT CANDIDATES

Our success depends heavily on the approval and successful commercialization of our lead product candidates, Betrixaban and Andexanet alfa along with Cerdulatinib and our selective Syk inhibitor program. Clinical studies of these product candidates may not be successful. If we are unable to commercialize one or more of our product candidates, or experience significant delays in doing so, our business will be materially harmed.

We have invested a significant portion of our efforts and financial resources into the development of Betrixaban, Andexanet alfa, and, to a lesser extent, Cerdulatinib and our selective Syk inhibitor program. Our ability to generate product revenue, which will not occur until after regulatory approval, if ever, will depend on the successful development, regulatory approval and eventual commercialization of one of our product candidates. The success of our product candidates will depend on several factors, including the following:

- successful enrollment in, and completion of, clinical studies;
- our ability to reach agreement with the FDA and other regulatory authorities on the appropriate regulatory path for approval of our product candidates;
- receipt of marketing approvals from the FDA and similar regulatory authorities outside the United States for our product candidates;

- establishing commercial manufacturing arrangements with third parties;
- ability to manufacture product commercially at acceptable costs;
- commercializing any product candidate that may be approved, whether alone or in collaboration with others;
- acceptance of any approved product by the medical community, third-party payors and patients;
- effectively competing with other therapies;
- a continued acceptable safety profile of the product following approval; and
- obtaining, maintaining, enforcing and defending intellectual property rights and claims.

If we do not achieve one or more of these factors in a timely manner or at all, we could experience significant delays or an inability to successfully commercialize our product candidates, which would materially harm our business.

If clinical studies of our product candidates fail to demonstrate safety and efficacy to the satisfaction of the FDA or similar regulatory authorities outside the United States or do 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 our product candidates.

Before obtaining regulatory approval for the sale of our product candidates, we must conduct extensive clinical studies to demonstrate the safety and efficacy of our product candidates in humans. Clinical studies are expensive, difficult to design and implement, can take many years to complete and are uncertain as to outcome. A failure of one or more of our clinical studies could occur at any stage of testing. The outcome of preclinical testing and early clinical studies may not be predictive of the success of later clinical studies, and interim results of a clinical study do not necessarily predict final results.

For example, the favorable results from our Phase 2 clinical studies of Betrixaban, which involved the prophylaxis, or preventive treatment, against venous thromboembolism, or VTE, in patients receiving total knee replacements and the prevention of stroke in patients with atrial fibrillation, may not be predictive of success in our current Phase 3 APEX clinical study of Betrixaban for extended duration VTE prophylaxis for 35 days of in-hospital and post-discharge use in acute medically ill patients with elevated blood levels of D-dimer or over the age of 75, as the Phase 2 studies were not designed to demonstrate statistically significant effectiveness, were in different medical conditions, involved different patient populations or dosing regimens, were of different duration or had different comparators. Any of these factors and other factors could result in Betrixaban showing decreased activity or increased safety risks in our APEX study as compared to the Phase 2 studies.

Moreover, the probability of our APEX study succeeding is highly dependent on the adequacy of its design. Two other Factor Xa inhibitors have failed in Phase 3 trials for the indication that we are pursuing for Betrixaban. We have reviewed publicly available data from those studies and incorporated the results of our analysis into the design of our APEX study, but we could have misinterpreted the data or performed a flawed analysis. Furthermore, relevant information from the studies may not be publicly available or, if available, may not have been obtained by us. As a result, there could be flaws in the design of our APEX study that could cause it to fail. For example, our patient inclusion criteria for the APEX study selects for patients with a higher risk of VTE, and these patients may be more likely to experience a severe bleeding event, even though we attempt to exclude certain patients at higher risk of bleeding. If patients in the APEX study experience a higher than expected rate of severe bleeding events, the APEX study may fail to demonstrate a sufficient safety profile for Betrixaban. In addition, preclinical and clinical data are often susceptible to varying interpretations and analyses, and many companies that have believed their product candidates performed satisfactorily in preclinical studies and clinical trials have nonetheless failed to obtain regulatory approval for the marketing of their products.

Similarly, the favorable results from our Phase 2 proof-of concept studies of Andexanet alfa, evaluating the effect of Andexanet alfa in healthy volunteers taking apixaban, rivaroxaban, edoxaban or enoxaparin, may not be predictive of success in our other Phase 3 or other later studies. In addition, our recent announcements that parts 1 of our Phase 3 ANNEXA-A (apixaban) and ANNEXA-R (rivaroxaban) studies demonstrated that, for the primary efficacy endpoint, an intravenous bolus of Andexanet alfa immediately and significantly reversed the anticoagulation activity of apixaban and rivaroxaban, may not be predictive of success in other ANNEXA studies with other Factor Xa inhibitors or in parts 2 of our ANNEXA-A and ANNEXA-R studies which include a bolus plus continuous infusion of Andexanet alfa. We also do not yet know how the results from our clinical studies of Andexanet alfa in healthy volunteers who have received a Factor Xa inhibitor followed by Andexanet alfa will translate into clinical outcomes in patients. Moreover, the results from our studies to date of Andexanet alfa may not address the effect of repeat doses or allow a determination of the optimal therapeutic dose of Andexanet alfa for our intended target patient population.

We may experience numerous unforeseen events during, or as a result of, clinical studies that could delay or prevent our ability to receive regulatory approval or commercialize our product candidates, including the following:

- clinical studies of our product candidates may produce negative or inconclusive results, and we may decide, or regulators may require us, to conduct additional clinical studies or abandon product development programs;
- the number of patients required for clinical studies of our product candidates may be larger than we anticipate, enrollment in these clinical studies may be insufficient or slower than we anticipate or patients may drop out of these clinical studies at a higher rate than we anticipate;
- the cost of clinical studies or the manufacturing of our product candidates may be greater than we anticipate;
- our third-party contractors may fail to comply with regulatory requirements or meet their contractual obligations to us in a timely manner, or at all;
- we might have to suspend or terminate clinical studies of our product candidates for various reasons, including unanticipated serious side effects, other unexpected characteristics or unacceptable health risks;
- regulators may not approve our proposed clinical development plans;
- regulators or institutional review boards may not authorize us or our investigators to commence a clinical study or conduct a clinical study at a prospective study site;
- regulators or institutional review boards may require that we or our investigators suspend or terminate clinical research for various reasons, including noncompliance with regulatory requirements; and
- the supply or quality of our product candidates or other materials necessary to conduct clinical studies of our product candidates may be insufficient or inadequate.

If we are required to conduct additional clinical studies or other testing of our product candidates beyond those that we currently contemplate, if we are unable to successfully complete clinical studies of our product candidates or other testing, if the results of these studies or tests are not positive or are only modestly positive or if there are safety concerns, we may:

- be delayed in obtaining marketing approval for our product candidates;
- not obtain marketing approval at all;
- obtain approval for indications that are not as broad as intended;
- have the product removed from the market after obtaining marketing approval;
- be subject to additional post-marketing testing requirements; or
- be subject to restrictions on how the product is distributed or used.

Our product development costs will also increase if we experience delays in testing or approvals. We do not know whether any clinical studies will begin as planned, will need to be restructured or will be completed on schedule, or at all. Significant clinical study delays also could shorten any periods during which we may have the exclusive right to commercialize our product candidates or allow our competitors to bring products to market before we do, which would impair our ability to commercialize our product candidates and harm our business and results of operations.

If serious adverse side effects are identified during the development of any of our product candidates, we may need to abandon our development of that product candidate.

None of our product candidates has completed clinical development. The risk of failure of clinical development is high. It is impossible to predict when or if any of our product candidates will prove safe enough to receive regulatory approval. For example, our product candidate Betrixaban, like all currently marketed inhibitors of Factor Xa, carries some risk of life-threatening bleeding. In addition, patients taking Betrixaban in our Phase 2 studies had an increased rate of gastrointestinal issues, such as diarrhea, nausea and vomiting, and other side effects such as back pain, dizziness, headaches, rashes and insomnia as compared to subjects taking a placebo or an active comparator. There can be no assurance that our APEX study or other clinical studies will not fail due to safety issues. In such an event, we might need to abandon development of that product candidate or enter into a partnership to continue development.

The failure of two of our competitors' clinical trials evaluating Factor Xa inhibitors for VTE prophylaxis in acute medically ill patients may suggest an increased risk that our APEX trial for Betrixaban will also fail.

Two of our competitors' clinical trials evaluating Factor Xa inhibitors for VTE prophylaxis in acute medically ill patients have failed. The MAGELLAN trial sponsored by Bayer Pharma AG, or Bayer, and Janssen Pharmaceuticals, Inc., or Janssen, which evaluated rivaroxaban, demonstrated efficacy but failed to demonstrate an acceptable benefit to risk profile due to increased bleeding. The ADOPT trial sponsored by Bristol-Myers Squibb Company, which evaluated apixaban, showed a reduction in VTE events, but failed to demonstrate statistically significant efficacy and also showed an increase in bleeding. Betrixaban, like rivaroxaban and apixaban, may fail in clinical trials if it does not show a statistically significant level of efficacy or if the resulting bleeding risk is too high compared to its benefits.

Delays in the enrollment of patients in any of our clinical studies could increase our development costs and delay completion of our clinical studies and associated regulatory submissions.

We may not be able to initiate or continue clinical studies for our product candidates if we are unable to locate and enroll a sufficient number of eligible patients to participate in these studies as required by the FDA or other regulatory authorities. Even if we are able to enroll a sufficient number of patients in our clinical studies, if the pace of enrollment is slower than we expect, the development costs for our product candidates may increase, and the completion of our studies may be delayed or our studies could become too expensive to complete.

For example, our Phase 3 Betrixaban APEX study is expected to enroll approximately 6,850 patients from over 500 study sites throughout the world. We have never previously conducted a study of this magnitude and can provide no assurance that we will be able to enroll patients to complete the study within our projected time frame. The first patient was enrolled in APEX in March 2012, and, based on current enrollment, we expect patient enrollment to be completed by the end of 2015, later than we initially estimated. Completing the study by that date will require us to continue to enroll patients at established rates. If we experience delays in enrollment, our ability to complete our APEX study could be materially adversely affected. If we are unable to continue to enroll the patients at the established rate, the completion of the study could be delayed and the costs of conducting the study could increase, either of which could have a material adverse effect on our business.

As another example, the ANNEXA-4 study of Andexanet alfa is our first experience in patients with major bleeding who are receiving a factor Xa inhibitor. Because we have no first-hand enrollment experience in this patient population, our enrollment forecasts are estimated based on our understanding of enrollment experience of similar studies conducted by others in similar patient populations. Our current forecasts suggest that enrolling up to 270 patients should ensure that a sufficient number are able to be included in the primary analysis. However, if after enrolling 270 patients, the true number of evaluable patients is less than required, it may be necessary to continue enrolling additional patients beyond the planned 270. Enrollment of additional patients (or slower than anticipated enrollment of the currently planned 270 patients) could increase the cost and duration of the study, and could result in alterations of the clinical plan including, but not limited to, opening of additional sites or geographic regions, both of which would result in increased costs. In addition, our current enrollment forecasts indicate that enrollment of enough patients to satisfy requests from regulators will occur in time to support an Andexanet alfa BLA submission in 2015. However, if the actual enrollment rate differs from our predicted rate, we may not meet these enrollment targets which could delay the BLA submission.

Even if Andexanet alfa is approved by the FDA, this approval may be limited to certain indications, additional clinical studies and regulatory applications may be required to expand Andexanet alfa indications and we can provide no assurances that such additional clinical studies or regulatory applications will be successful.

We are developing Andexanet alfa as a universal antidote for patients receiving a Factor Xa inhibitor anticoagulant who suffer a major bleeding episode or who may require emergency surgery. Our ANNEXA-4 Phase 4 study is being conducted in patients receiving either a direct or indirect Factor Xa inhibitor who present with an acute major bleed, and our ANNEXA Phase 3 registration-enabling studies have been conducted on healthy volunteers. It is not certain at this time which indications, if any, the FDA will approve based on this data. It is possible that additional clinical studies will required to support our targeted indications, which would require additional time and expense and may not prove successful. Limitations in our label for Andexanet alfa would reduce the number of patients for whom Andexanet alfa is indicated and could reduce the size of the anticipated market and our financial prospects.

Even if our APEX study demonstrates statistically significant efficacy and safety of Betrixaban for extended duration VTE prophylaxis in acute medically ill patients for 35 days of in-hospital and post-discharge use, the FDA or similar regulatory authorities outside the United States may not approve Betrixaban for marketing or may approve it with restrictions on the label, which could have a material adverse effect on our business, financial condition, results of operations and growth prospects.

Assuming the success of our APEX study, we anticipate seeking regulatory approval for Betrixaban in the United States for extended duration VTE prophylaxis in acute medically ill patients for 35 days of in-hospital and post-discharge use. It is possible that the FDA may not consider the results of our APEX study to be sufficient for approval of Betrixaban for this indication. In general, the FDA suggests that sponsors complete two adequate and well-controlled clinical studies to demonstrate effectiveness because a conclusion based on two persuasive studies will be more compelling than a conclusion based on a single study. Although the FDA has informed us that our APEX study, plus supportive Phase 2 data obtained to date, could potentially provide sufficient safety and efficacy data for extended duration VTE prophylaxis in acute medically ill patients for 35 days of in-hospital and post-discharge use, the FDA has further advised us that whether one or two adequate and well-controlled clinical studies are required will be a review issue in connection with a new drug application, or NDA, submission. Even if we achieve favorable results in our APEX study, the FDA may nonetheless require that we conduct additional clinical studies, possibly using a different clinical study design.

Even if the FDA or other regulatory authorities approve Betrixaban for VTE prophylaxis in acute medically ill patients, the approval may include additional restrictions on the label that could make Betrixaban less attractive to physicians and patients than other products that may be approved for broader indications, which could reduce the potential market for Betrixaban.

We are seeking regulatory approval of Andexanet alfa in the United States through an Accelerated Approval process, and since we have limited experience with this process, the development or commercialization of Andexanet alfa could be delayed or abandoned.

In November 2013, the FDA granted breakthrough therapy designation for Andexanet alfa which allows for an Accelerated Approval process. In addition, we have reached agreement with the FDA on an Accelerated Approval strategy. The Accelerated Approval regulations allow drugs that are being developed to treat an unmet medical need to be approved substantially based on evidence of an effect on a surrogate biomarker endpoint that is considered reasonably likely to predict clinical benefit rather than a clinical endpoint such as survival or irreversible morbidity. Use of an Accelerated Approval process provides a shortened timetable to approval, but a Phase 4 clinical study with clinical endpoints that will confirm the validity of the surrogate endpoint(s) must be ongoing at the time our BLA is submitted and some early patient data will be required by the FDA to support the BLA. We expect that this study will continue into commercialization. Because of the accelerated timelines required for accelerated approval, we may require more time and incur greater costs than anticipated and may not succeed in timely manufacture of drug supply or in obtaining regulatory approval of Andexanet alfa. In addition, the FDA may subsequently determine that the studies conducted by us were insufficient to support approval or require us to conduct extensive post-approval studies.

Even if our product candidates receive regulatory approval, they may fail to achieve the degree of market acceptance by physicians, patients, healthcare payors and others in the medical community necessary for commercial success.

If any of our product candidates receive regulatory approval, they may nonetheless fail to gain sufficient market acceptance by physicians, hospital administrators, patients, healthcare payors and others in the medical community. The degree of market acceptance of our product candidates, if approved for commercial sale, will depend on a number of factors, including the following:

- the prevalence and severity of any side effects;
- efficacy and potential advantages compared to alternative treatments;
- the price we charge for our product candidates;

- the willingness of physicians to change their current treatment practices;
- the willingness of hospitals and hospital systems to include our product candidates as treatment options;
- convenience and ease of administration compared to alternative treatments;
- the willingness of the target patient population to try new therapies and of physicians to prescribe these therapies;
- the strength of marketing and distribution support; and
- the availability of third-party coverage or reimbursement.

For example, while there are no approved therapies for VTE prophylaxis in acute medically ill patients approved for use beyond the typical hospitalization period, there are therapies available for in-hospital use and physicians may not be willing to change their current in-hospital treatment practices in favor of Betrixaban. If our product candidates, if approved, do not achieve an adequate level of acceptance, we may not generate significant product revenue and we may not become profitable on a sustained basis.

There are risks associated with scaling up manufacturing to commercial scale. Our commercial manufacturing strategy for Andexanet alfa is particularly complex and challenging. If our manufacturers are unable to manufacture our products on a commercial scale or scale to increased production, this could potentially delay regulatory approval and commercialization or materially adversely affect our results of operations.

There are risks associated with scaling up manufacturing to commercial volumes including, among others, cost overruns, technical problems with process scale-up, process reproducibility, stability issues, lot consistency and timely availability of raw materials. Even if we could otherwise obtain regulatory approval for any product candidate, there is no assurance that our manufacturer will be able to manufacture the approved product to specifications acceptable to the FDA or other regulatory authorities, to produce it in sufficient quantities to meet the requirements for the potential launch of the product or to meet potential future demand. If our manufacturers are unable to produce sufficient quantities of the approved product for commercialization, either on a timely basis or at all, our commercialization efforts would be impaired, which would have a material adverse effect on our business, financial condition, results of operations and growth prospects.

In particular, we face uncertainties and risks associated with scaling up the manufacturing for Andexanet alfa. Andexanet alfa is a recombinant biological molecule, or biologic, rather than a small molecule chemical compound like our other product candidates. The manufacture of biologics involves complex processes, typically including developing cell lines or cell systems to produce the biologic, growing large quantities of such cells and harvesting and purifying the biologic produced by them. The cost to manufacture biologics is generally far higher than traditional small molecule chemical compounds, and the manufacturing process is more complex and can be difficult to reproduce. There is no guarantee we will be successful in establishing a larger-scale commercial manufacturing process for Andexanet alfa which achieves our objectives for manufacturing capacity and cost of goods. Due, in part, to the high cost to manufacture Andexanet alfa and the inherent uncertainty related to manufacturing costs, if the effective dose of Andexanet alfa is higher than we anticipate or the obtainable sales price is lower than we anticipate, there is a greater risk that Andexanet alfa may not be commercially viable.

Andexanet alfa used in our clinical studies is currently produced for us by a third-party contract manufacturer, CMC ICOS Biologics, Inc., or CMC Biologics, who will also support our initial BLA submission and initial commercial launch in the U.S. However, to support broader U.S. and worldwide supply with a lower cost, we must also increase production capacity at CMC Biologics, add production from Lonza or another larger-scale manufacturer, and improve the manufacturing process to increase the yield and lower the manufacturing costs. Developing a commercial manufacturing process with two separate commercial manufacturing organizations increases the cost and complexity of commercial manufacturing which could increase the risk of successful implementation of our commercial manufacturing supply strategy.

We do not anticipate that supply from CMC Biologics, even as expanded, will be sufficient to meet projected worldwide demand for Andexanet alfa, therefore, we must also develop an improved and more cost-effective process at Lonza. However, the first commercial material from Lonza will not become available until after our expected U.S. launch. There is significant technical and regulatory work which we will need to complete before Lonza is able to produce commercial quantities of Andexanet alfa and there remains substantial uncertainty whether Lonza will be able to produce commercial supply of Andexanet alfa at the quantities and cost of goods necessary for commercial success. Previous scale-up work was unsuccessful in achieving acceptable product yield within the desired timeline.

In addition, in order to obtain FDA approval of material produced by a new vendor or using a new process, we will need to demonstrate that such material is comparable to the clinical material we previously used and material produced by CMC Biologics. Demonstrating comparability can require significant pre-clinical and clinical studies. If we are not able to demonstrate comparability, then the material may be considered a new biological entity and a new clinical program, possibly commencing with Phase 1, and requiring a full BLA submission may be required for approval, resulting in additional time and expense. If we are not able to establish targeted capacity at CMC Biologics and Lonza on a timely basis, implement the proposed transitions in a timely manner, or establish comparability of the new material, or obtain the anticipated improvements in efficiency, our business, financial condition, results of operations and growth prospects would be materially adversely affected.

We currently have no sales or distribution personnel and only limited marketing capabilities. If we are unable to develop a sales and marketing and distribution capability on our own or through collaborations or other marketing partners, we will not be successful in commercializing Betrixaban, Andexanet alfa or other future products.

We do not currently have a significant sales or marketing infrastructure and have never sold, marketed or distributed therapeutic products. To achieve commercial success for any approved product, we must either develop a sales and marketing organization or outsource these functions to third parties. We plan to establish a hospital-based sales force in the United States and possibly other major markets and work with partners in other parts of the world to commercialize both Betrixaban and Andexanet alfa globally, if they are approved. There are risks involved with both establishing our own sales and marketing capabilities and entering into arrangements with third parties to perform these services. For example, recruiting and training a sales force is expensive and time-consuming and could delay any product launch. If the commercial launch of a product candidate for which we recruit a sales force and establish marketing capabilities is delayed or does not occur for any reason, we would have prematurely or unnecessarily incurred these commercialization expenses. This may be costly, and our investment would be lost if we cannot retain or reposition our sales and marketing personnel.

We also may not be successful entering into arrangements with third parties to sell and market our product candidates or may be unable to do so on terms that are favorable to us. We likely will have little control over such third parties, and any of them may fail to devote the necessary resources and attention to sell and market our products effectively, which could damage our reputation. If we do not establish sales and marketing capabilities successfully, either on our own or in collaboration with third parties, we will not be successful in commercializing our product candidates.

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

The development and commercialization of new therapeutic products is highly competitive. We face competition with respect to our current product candidates, and will face competition with respect to any products that we may seek to develop or commercialize in the future, from major pharmaceutical companies, specialty pharmaceutical companies and biotechnology companies worldwide. For example, several large pharmaceutical and biotechnology companies currently market and sell direct or indirect Factor Xa inhibitors for use in various disease states, including injectable Factor Xa inhibitors for the prevention of VTE in acute medically ill patients. Potential competitors also include academic institutions, government agencies and other public and private research organizations that conduct research, seek patent protection and establish collaborative arrangements for research, development, manufacturing and commercialization. Many of these competitors are attempting to develop therapeutics for our target indications.

In addition, many of our competitors are large pharmaceutical companies that will have a greater ability to reduce prices for their competing drugs in an effort to gain market share and undermine the value proposition that we might otherwise be able to offer to payors. We are developing our product candidate Betrixaban for extended duration VTE prophylaxis in acute medically ill patients for 35 days of in-hospital and post-discharge use. The current standard of care for VTE prophylaxis in acute medically ill patients in the United States is a 6- to 14-day hospital administration of enoxaparin, marketed as Lovenox® and also available in generic form, an indirect Factor Xa inhibitor. Enoxaparin is widely accepted by physicians, patients and third-party payors. As a result, we may face difficulties in marketing Betrixaban as a substitute therapy in the hospital for the current standard of care, enoxaparin.

Furthermore, the FDA has already approved a number of therapies that, like Betrixaban, are oral direct Factor Xa inhibitors and that have already achieved substantial market acceptance. Although these products have not been approved for VTE prophylaxis in acute medically ill patients, the owners of the products may decide to seek such approval or physicians may decide to prescribe these products for the treatment of VTE in acute medically ill patients absent such approval, known as prescribing “off-label.” Further, our competitors may have the financial and other resources to conduct additional clinical studies in an effort to obtain regulatory approval for use of their drugs for VTE prophylaxis in acute medically ill patients, even in cases where they have previously run clinical trials that have failed. For example, in March 2014, Bayer and Janssen announced the initiation of a new Phase 3 clinical trial to evaluate the safety and efficacy of rivaroxaban to reduce the risk of post-hospital discharge symptomatic VTE in patients hospitalized for acute medical illness.

While there are no therapies approved specifically as antidotes for Factor Xa inhibitors, we are aware of at least one drug candidate being studied in early stage clinical trials as a potential antidote to Factor Xa inhibitors. In addition, in December 2014, Bristol-Myers Squibb Company and Pfizer Inc. announced that a clinical trial of 15 healthy human subjects demonstrated that 4-factor prothrombin complex concentrates reversed the steady-state pharmacodynamics effects of Eliquis (apixaban). Andexanet alfa, if approved, may compete with other currently approved treatments designed to enhance coagulation, such as fresh frozen plasma, prothrombin complex concentrates, recombinant Factor VIIa or whole blood. Although there is no clinical evidence supporting the use of such treatments in patients taking Factor Xa inhibitors, physicians may choose to use them because of familiarity, cost or other reasons. In addition, we are aware that several companies have conducted preclinical research on compounds intended to be antidotes for Factor Xa inhibitors.

There are also a number of products in clinical development for hematologic cancer, ophthalmological diseases, allergic rhinitis, allergic asthma and other inflammatory diseases that are potential indications for Cerdulatinib or selective Syk inhibitors. Our competitors may develop products that are more effective, safer, more convenient or less costly than any that we are developing or that would render our product candidates obsolete or noncompetitive. Many competing products are in later stages of development than our products and are, therefore, likely to obtain FDA or other regulatory approval for their products before we obtain approval for ours. Many of our competitors, including a number of large pharmaceutical companies that compete directly with us, have significantly greater financial resources and expertise in research and development, manufacturing, preclinical testing, conducting clinical trials, obtaining regulatory approvals and marketing approved products than we do. Mergers and acquisitions in the pharmaceutical, biotechnology and diagnostic industries may result in even more resources being concentrated among a smaller number of our competitors. Smaller or early stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. These third parties compete with us in recruiting and retaining qualified scientific and management personnel, establishing clinical study sites and patient registration for clinical studies, as well as in acquiring technologies complementary to, or necessary for, our programs.

RISKS RELATED TO OUR RELIANCE ON THIRD PARTIES

We rely on third parties to conduct our clinical studies, and those third parties may not perform satisfactorily, including failing to meet deadlines for the completion of such studies.

We do not independently conduct clinical studies of our product candidates. We rely on third parties, such as contract research organizations, or CROs, clinical data management organizations, medical institutions and clinical investigators, to perform this function. For example, we rely on PPD Development, LP and other CROs to oversee and manage our APEX study. Our reliance on these third parties for clinical development activities reduces our control over these activities but does not relieve us of our responsibilities. Furthermore, most of the clinical study sites for our APEX study are outside the United States, including several developing countries. The performance of these sites may be adversely affected by various issues, including less advanced medical infrastructure, lack of familiarity with conducting clinical studies using U.S. standards, insufficient training of personnel, communication difficulties and geopolitical risk. We remain responsible for ensuring that each of our clinical studies is conducted in accordance with the general investigational plan and protocols for the study.

Moreover, the FDA requires us to comply with standards, commonly referred to as good clinical practices, for conducting, recording and reporting the results of clinical studies to assure that data and reported results are credible and accurate and that the rights, integrity and confidentiality of patients in clinical studies are protected. Furthermore, these third parties may also have relationships with other entities, some of which may be our competitors. If these third parties do not successfully carry out their contractual duties, meet expected deadlines or conduct our clinical studies in accordance with regulatory requirements or our stated protocols, we will not be able to obtain, or may be delayed in obtaining, regulatory approvals for our product candidates and will not be able to, or may be delayed in our efforts to, successfully commercialize our product candidates.

We also rely on other third parties to store and distribute supplies for our clinical studies. Any performance failure on the part of our existing or future distributors could delay clinical development or regulatory approval of our product candidates or commercialization of our products, producing additional losses and depriving us of potential product revenue.

We rely on third-party contract manufacturing organizations to manufacture and supply our product candidates for us. If one of our suppliers or manufacturers fails to perform adequately or fulfill our needs, we may be required to incur significant costs and devote significant efforts to find new suppliers or manufacturers. We may also face significant delays in the development and commercialization of our product candidates.

We do not own facilities for, clinical-scale or commercial manufacturing of our product candidates. We currently rely critically on individual suppliers for each of our product candidates. For example, we rely on Hovione Inter Limited to produce the active pharmaceutical ingredient for Betrixaban for our APEX study, we have contracted with CMC Biologics to expand its production capacity of Andexanet alfa bulk drug substance to support our potential U.S. commercial launch, and we have engaged Lonza to develop a new, higher-capacity and lower cost process for Andexanet alfa bulk drug substance in order to support our broader, worldwide commercialization strategy. We have not yet entered into a commercial supply agreement for the manufacture of Betrixaban. We also rely or expect to rely on other third party providers for lyophilization, packaging, labeling and supply chain distribution. If we and our suppliers cannot agree to the terms and conditions for them to provide the drug product necessary for our clinical and commercial supply needs, or if any single source supplier terminates the agreement in response to a breach by us or otherwise becomes unable to fulfill its supply obligations, we would not be able to manufacture and distribute the product candidate until a qualified alternative supplier is identified, which could also significantly delay the development of, and impair our ability to commercialize, our product candidates.

The manufacture of pharmaceutical products in compliance with the FDA's current good manufacturing practices, or cGMPs, requires significant expertise and capital investment, including the development of advanced manufacturing techniques and process controls. Manufacturers of pharmaceutical products often encounter difficulties in production, including difficulties with production costs and yields, quality control, including stability of the product candidate and quality assurance testing, shortages of qualified personnel, as well as compliance with strictly enforced cGMP requirements, other federal and state regulatory requirements and foreign regulations. If our manufacturers were to encounter any of these difficulties or otherwise fail to comply with their obligations to us or under applicable regulations, our ability to supply our clinical studies or commercial demand would be jeopardized. Any delay or interruption in the supply of clinical study materials could delay the completion of our clinical studies, increase the costs associated with maintaining our clinical study programs and, depending upon the period of delay, require us to commence new studies at significant additional expense or terminate the studies completely.

All manufacturers of our product candidates must comply with cGMP requirements enforced by the FDA through its facilities inspection program. These requirements include, among other things, quality control, quality assurance and the maintenance of records and documentation. Manufacturers of our product candidates may be unable to comply with these cGMP requirements and with other FDA, state and foreign regulatory requirements. The FDA or similar foreign regulatory agencies may also implement new standards at any time, or change their interpretation and enforcement of existing standards for manufacturing, packaging or testing of products. We have limited control over our manufacturers' compliance with these regulations and standards. A failure to comply with these requirements may result in fines and civil penalties, suspension of production, suspension or delay in product approval, product seizure or recall or withdrawal of product approval. If the safety of any product supplied is compromised due to our manufacturers' failure to adhere to applicable laws or for other reasons, we may not be able to obtain regulatory approval for or successfully commercialize our products and we may be held liable for any injuries sustained as a result. Any of these factors could cause a delay of clinical studies, regulatory submissions, approvals or commercialization of our product candidates, entail higher costs or impair our reputation.

Although alternative sources of supply exist, the number of third-party suppliers with the necessary manufacturing and regulatory expertise and facilities to manufacture biologics is limited, and it could be expensive and take a significant amount of time to arrange for alternative suppliers, which could have a material adverse effect on our business. New suppliers of any product candidate would be required to qualify under applicable regulatory requirements and would need to have sufficient rights under applicable intellectual property laws to the method of manufacturing the product candidate. Obtaining the necessary FDA approvals or other qualifications under applicable regulatory requirements and ensuring non-infringement of third-party intellectual property rights could result in a significant interruption of supply and could require the new manufacturer to bear significant additional costs which may be passed on to us.

We may enter into collaborations that place the development of our product candidates outside our control, require us to relinquish important rights or may otherwise be on terms unfavorable to us, and if our collaborations are not successful, our product candidates may not reach their full market potential.

We may enter into additional collaboration agreements with third parties with respect to our product candidates for the commercialization of the candidates outside the U.S., or for other purposes. In addition, depending on our capital requirements, development and commercialization costs, need for additional therapeutic expertise and other factors, it is possible that we will enter into broader development and commercialization arrangements with respect to our product candidates. Our likely collaborators for any distribution, marketing, licensing or broader collaboration arrangements include large and mid-size pharmaceutical companies, regional and national pharmaceutical companies and biotechnology companies. We will have limited control over the amount and timing of resources that our collaborators dedicate to the development or commercialization of our product candidates. Our ability to generate revenue from these arrangements will depend in part on our collaborators' abilities to successfully perform the functions assigned to them in these arrangements.

Collaborations involving our product candidates are subject to numerous risks, which may include the following:

- collaborators have significant discretion in determining the efforts and resources that they will apply to any such collaborations;
- collaborators may not pursue development and commercialization of our product candidates or may elect not to continue or renew development or commercialization programs based on clinical study results, changes in their strategic focus due to the acquisition of competitive products, availability of funding or other external factors, such as a business combination that diverts resources or creates competing priorities;
- collaborators may delay clinical studies, provide insufficient funding for a clinical study program, stop a clinical study, abandon a product candidate, repeat or conduct new clinical studies or require a new formulation of a product candidate for clinical testing;
- collaborators could independently develop, or develop with third parties, products that compete directly or indirectly with our products or product candidates;
- a collaborator with marketing and distribution rights to one or more products may not commit sufficient resources to their marketing and distribution;
- collaborators may not properly maintain or defend our intellectual property rights or may use our intellectual property or proprietary information in a way that gives rise to actual or threatened litigation that could jeopardize or invalidate our intellectual property or proprietary information or expose us to potential liability;
- disputes may arise between us and a collaborator that causes the delay or termination of the research, development or commercialization of our product candidates or that results in costly litigation or arbitration that diverts management attention and resources;
- collaborations may be terminated and, if terminated, may result in a need for additional capital to pursue further development or commercialization of the applicable product candidates; and
- collaborators may own or co-own intellectual property covering our products that results from our collaborating with them, and in such cases, we would not have the exclusive right to commercialize such intellectual property.

Any termination or disruption of our collaboration with potential collaborators could result in delays in the development and commercialization of our product candidates, increases in our costs to develop and commercialize the product candidate or the termination of development of a product candidate.

RISKS RELATED TO THE OPERATION OF OUR BUSINESS

Our future success depends on our ability to retain our chief executive officer and other key executives and to attract, retain and motivate qualified personnel.

We are highly dependent on William Lis, our Chief Executive Officer, and the other principal members of our executive and scientific teams. Under the terms of their employment, our executives may terminate their employment with us at any time. The loss of the services of any of these people could impede the achievement of our research, development and commercialization objectives. We maintain "key person" insurance for Mr. Lis but not for any other executives or employees. Any insurance proceeds we may receive under our "key person" insurance on Mr. Lis would not adequately compensate us for the loss of his services.

Recruiting and retaining qualified scientific, clinical, manufacturing and sales and marketing personnel will also be critical to our success. We may not be able to attract and retain these personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us.

We expect to expand our development, regulatory and sales and marketing capabilities, and as a result, we may encounter difficulties in managing our growth, which could disrupt our operations.

Over the next several years, we expect to experience significant growth in the number of our employees and the scope of our operations, particularly in the areas of drug development, regulatory affairs and sales and marketing. To manage our anticipated future growth, we must continue to implement and improve our managerial, operational and financial systems, expand our facilities and continue to recruit and train additional qualified personnel. Due to our limited financial resources and the limited experience of our management team in managing a company with such anticipated growth, we may not be able to effectively manage the expansion of our operations or recruit and train additional qualified personnel. The physical expansion of our operations may lead to significant costs and may divert our management and business development resources. Any inability to manage growth could delay the execution of our business plans or disrupt our operations.

We are incurring significant increased costs as a result of operating as a public company, and our management will be required to devote substantial time to new compliance initiatives.

As a public company, we are incurring significant legal, accounting and other expenses that we did not incur as a private company. In addition, the Sarbanes-Oxley Act, and rules of the SEC and those of The NASDAQ Stock Market, or the NASDAQ, have imposed various requirements on public companies including requiring establishment and maintenance of effective disclosure and financial controls. Our management and other personnel have and will need to continue to devote a substantial amount of time to these compliance initiatives. Moreover, these rules and regulations have increased and will continue to increase our legal and financial compliance costs and will make some activities more time-consuming and costly.

The Sarbanes-Oxley Act requires, among other things, that we maintain effective internal control over financial reporting and disclosure controls and procedures. In particular, we must perform system and process evaluation and testing of our internal control over financial reporting to allow management to report on the effectiveness of our internal control over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act. In addition, we are required to have our independent registered public accounting firm attest to the effectiveness of our internal control over financial reporting. Our compliance with Section 404 of the Sarbanes-Oxley Act, as applicable, requires us to incur substantial accounting expense and expend significant management efforts. We currently do not have an internal audit group, and we will need to continue to hire additional accounting and financial staff with appropriate public company experience and technical accounting knowledge. If we are not able to comply with the requirements of Section 404, as applicable, in a timely manner, or if we or our independent registered public accounting firm identify deficiencies in our internal control over financial reporting that are deemed to be material weaknesses, the market price of our stock could decline and we could be subject to sanctions or investigations by the NASDAQ, the SEC or other regulatory authorities, which would require additional financial and management resources.

Our ability to successfully implement our business plan and comply with Section 404, as applicable, requires us to be able to prepare timely and accurate financial statements. We expect that we will need to continue to improve existing, and implement new operational and financial systems, procedures and controls to manage our business effectively. Any delay in the implementation of, or disruption in the transition to, new or enhanced systems, procedures or controls, may cause our operations to suffer and we may be unable to conclude that our internal control over financial reporting is effective and to obtain an unqualified report on internal controls from our auditors as required under Section 404 of the Sarbanes-Oxley Act. If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results, and current and potential stockholders may lose confidence in our financial reporting. This, in turn, could have an adverse impact on trading prices for our common stock, and could adversely affect our ability to access the capital markets.

Product liability lawsuits against us could cause us to incur substantial liabilities and to limit commercialization of any products that we may develop.

We face an inherent risk of product liability exposure related to the testing of our product candidates in human clinical studies and will face an even greater risk if we commercially sell any products that we may develop. If we cannot successfully defend ourselves against claims that our product candidates or products caused injuries, we will incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in:

- decreased demand for any product candidates or products that we may develop;
- injury to our reputation and significant negative media attention;
- withdrawal of patients from clinical studies or cancellation of studies;
- significant costs to defend the related litigation;
- substantial monetary awards to patients;
- loss of revenue; and
- the inability to commercialize any products that we may develop.

We currently hold $10.0 million in product liability insurance coverage, which may not be adequate to cover all liabilities that we may incur. Insurance coverage is increasingly expensive. We may not be able to maintain insurance coverage at a reasonable cost or in an amount adequate to satisfy any liability that may arise.

We may expend our limited resources to pursue a particular product candidate or indication and fail to capitalize on product candidates or indications that may be more profitable or for which there is a greater likelihood of success.

Because we have limited financial and managerial resources, we focus on research programs and product candidates for specific indications. As a result, we may forego or delay pursuit of opportunities with other product candidates or other indications that later prove to have greater commercial potential. Our resource allocation decisions may cause us to fail to capitalize on viable commercial products or profitable market opportunities. Our spending on current and future research and development programs and product candidates for specific indications may not yield any commercially viable products.

If we do not accurately evaluate the commercial potential or target market for a particular product candidate, we may relinquish valuable rights to that product candidate through collaboration, licensing or other royalty arrangements in cases in which it would have been advantageous for us to retain sole development and commercialization rights.

If we fail to comply with environmental, health and safety laws and regulations, we could become subject to fines or penalties or incur costs that could have a material adverse effect on the success of our business.

We are subject to numerous environmental, health and safety laws and regulations, including those governing laboratory procedures and the handling, use, storage, treatment and disposal of hazardous materials and wastes. Our operations involve the use of hazardous and flammable materials, including chemicals and biological materials. Our operations also produce hazardous waste products. We generally contract with third parties for the disposal of these materials and wastes. We cannot eliminate the risk of contamination or injury from these materials. In the event of contamination or injury resulting from our use of hazardous materials, we could be held liable for any resulting damages, and any liability could exceed our resources. We also could incur significant costs associated with civil or criminal fines and penalties.

Although we maintain workers' compensation insurance to cover us for costs and expenses we may incur due to injuries to our employees resulting from the use of hazardous materials, this insurance may not provide adequate coverage against potential liabilities. We do not maintain insurance for environmental liability or toxic tort claims that may be asserted against us in connection with our storage or disposal of biological or hazardous materials. In addition, we may be required to incur substantial costs to comply with current or future environmental, health and safety laws and regulations. These current or future laws and regulations may impair our research, development or production efforts. Failure to comply with these laws and regulations also may result in substantial fines, penalties or other sanctions.

Business disruptions could seriously harm our future revenue and financial condition and increase our costs and expenses.

Our operations could be subject to earthquakes, power shortages, telecommunications failures, floods, hurricanes, typhoons, fires, extreme weather conditions, medical epidemics and other natural or manmade disasters or business interruptions. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses. Our corporate headquarters is located in California near major earthquake faults. Our operations and financial condition could suffer in the event of a major earthquake, fire or other natural or manmade disaster.

If we obtain approval to commercialize any approved products outside of the United States, a variety of risks associated with international operations could materially adversely affect our business. If any product candidates that we may develop are approved for commercialization outside the United States, we will be subject to additional risks related to entering into international business relationships, including:

- different regulatory requirements for drug approvals in foreign countries;
- reduced protection for intellectual property rights;
- unexpected changes in tariffs, trade barriers and regulatory requirements;
- economic weakness, including inflation or political instability in particular foreign economies and markets;
- compliance with tax, employment, immigration and labor laws for employees living or traveling abroad;
- foreign taxes, including withholding of payroll taxes;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incident to doing business in another country;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities abroad; and
- business interruptions resulting from geopolitical actions, including war and terrorism, or natural disasters including earthquakes, typhoons, floods and fires.

In connection with our Betrixaban and Andexanet alfa studies, we are currently utilizing certain suppliers outside of the United States, which subjects us to certain of the above risks. For example, a significant number of our APEX trial sites and enrolled patients are in Russia and the Ukraine, and the recent political unrest in the Ukraine has disrupted activities at five of our trial sites in this region. Continued or worsening political unrest in this region and the effect of international sanctions could adversely affect patient enrollment or other activities at our sites in the Ukraine and Russia.

Our internal computer systems, or those of our CROs or other contractors or consultants, may fail or suffer security breaches, which could result in a material disruption of our drug development programs.

Despite the implementation of security measures, our internal computer systems and those of our CROs and other contractors and consultants are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. While we have not experienced any such system failure, accident or security breach to date, if such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our drug development programs. For example, the loss of clinical study data from completed or ongoing clinical studies for any of our product candidates could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach was to result in a loss of or damage to our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the further development of our product candidates could be delayed.

RISKS RELATED TO INTELLECTUAL PROPERTY

If we fail to comply with our obligations in our intellectual property licenses with third parties, we could lose license rights that are important to our business.

We are a party to intellectual property license agreements with third parties, including with respect to Betrixaban, Cerdulatinib and selective Syk inhibitors, and expect to enter into additional license agreements in the future. Our existing license agreements impose, and we expect that our future license agreements will impose, various diligence, milestone payment, royalty, insurance and other obligations on us. If we fail to comply with these obligations, our licensors may have the right to terminate these agreements, in which event we may not be able to develop and market any product that is covered by these agreements. Termination of these licenses or reduction or elimination of our licensed rights may result in our having to negotiate new or reinstated licenses with less favorable terms or our not having sufficient intellectual property rights to operate our business. The occurrence of such events could materially harm our business.

Our ability to successfully commercialize our technology and products may be materially adversely affected if we are unable to obtain and maintain effective intellectual property rights for our technologies and product candidates.

Our success depends in large part on our and our licensors' ability to obtain and maintain patent and other intellectual property protection in the United States and in other countries with respect to our proprietary technology and products. 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 or products that we license from third parties. Therefore, we cannot be certain that these patents and applications will be prosecuted and enforced in a manner consistent with the best interests of our business. In addition, if third parties who license patents to us fail to maintain such patents, or lose rights to those patents, the rights we have licensed may be reduced or eliminated.

We have sought to protect our proprietary position by filing patent applications in the United States and abroad related to our novel technologies and products that are important to our business. This process is expensive and time-consuming, and we may not be able to file and prosecute all necessary or desirable patent applications at a reasonable cost or in a timely manner. It is also possible that we will fail to identify patentable aspects of our research and development output before it is too late to obtain patent protection. Our existing patents and any future patents we obtain may not be sufficiently broad to prevent others from using our technologies or from developing competing products and technologies. Under our collaboration agreement with Biogen Idec, we are obligated to use commercially reasonable efforts to file and prosecute patent applications, and maintain patents, covering selective Syk inhibitors in specified jurisdictions, and these patent rights are licensed to Biogen Idec.

The patent position of biotechnology and pharmaceutical companies generally is highly uncertain and involves complex legal and factual questions for which legal principles remain unresolved. In recent years patent rights have been the subject of significant litigation. As a result, the issuance, scope, validity, enforceability and commercial value of our and our licensors' patent rights are highly uncertain. Our and our licensors' pending and future patent applications may not result in patents being issued which protect our technology or products or which effectively prevent others from commercializing competitive technologies and products. Changes in either the patent laws or interpretation of the patent laws in the United States and other countries may diminish the value of our patents or narrow the scope of our patent protection. The laws of foreign countries may not protect our rights to the same extent as the laws of the United States. Publications of discoveries in the scientific literature often lag behind the actual discoveries, and patent applications in the United States and other jurisdictions are typically not published until 18 months after filing, or in some cases not at all. Therefore, we cannot be certain that we or our licensors were the first to make the inventions claimed in our owned and licensed patents or pending patent applications, or that we or our licensors were the first to file for patent protection of such inventions. Assuming the other requirements for patentability are met, prior to March 16, 2013, in the United States, the first to make the claimed invention is entitled to the patent, while outside the United States, the first to file a patent application is entitled to the patent. On March 16, 2013, under the recently enacted America Invents Act, the United States moved to a first to file system.

The effects of these changes are currently unclear as the United States Patent and Trademark Office, or USPTO, has only recently implemented various regulations, the courts have only just begun to issue decisions addressing these provisions and the applicability of the act and new regulations on specific patents discussed herein have not been determined and would need to be reviewed. We may become involved in opposition or interference proceedings challenging our patent rights or the patent rights of others, and the outcome of any proceedings are highly uncertain. For example, in November 2013, Zentiva k.s. and Günter SÖLCH separately filed papers with the European Patent Office opposing European Patent 2101760, assigned to Millennium Pharmaceuticals, Inc., to which we have an exclusive license. This patent is related to a formulation of Betrixaban. The opposition proceedings are still pending. An adverse determination in this or any other such proceeding could reduce the scope of, or invalidate, our patent rights, allow third parties to commercialize our technology or products and compete directly with us, without payment to us, or result in our inability to manufacture or commercialize products without infringing third-party patent rights.

Even if our owned and licensed patent applications issue as patents, they may not issue in a form that will provide us with any meaningful protection, prevent competitors from competing with us or otherwise provide us with any competitive advantage. Our competitors may be able to circumvent our owned or licensed patents by developing similar or alternative technologies or products in a non-infringing manner. The issuance of a patent is not conclusive as to its scope, validity or enforceability, and our owned and licensed patents may be challenged in the courts or patent offices in the United States and abroad. Such challenges may result in patent claims being narrowed, invalidated or held unenforceable, which could limit our ability to stop or prevent us from stopping others from using or commercializing similar or identical technology and products, or limit the duration of the patent protection of our technology and products. 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 or otherwise provide us with a competitive advantage.

We may become involved in lawsuits to protect or enforce our patents, which could be expensive, time-consuming and unsuccessful.

Competitors may infringe our patents. To counter infringement or unauthorized use, we may be required to file infringement claims, which can be expensive and time-consuming. In addition, in an infringement proceeding, a court may decide that a patent of ours is invalid or unenforceable, or may refuse to stop the other party from using the technology at issue on the grounds that our patents do not cover the technology in question. An adverse result in any litigation proceeding could put one or more of our patents at risk of being invalidated or interpreted narrowly. 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 type of litigation.

Third parties may initiate legal proceedings alleging that we are infringing their intellectual property rights, the outcome of which would be uncertain and could have a material adverse effect on the success of our business.

Our commercial success depends upon our ability and the ability of our collaborators to develop, manufacture, market and sell our product candidates and use our proprietary technologies without infringing, misappropriating or otherwise violating the proprietary rights or intellectual property of third parties. We may become party to, or be threatened with, future adversarial proceedings or litigation regarding intellectual property rights with respect to our products and technology, including interference proceedings before the USPTO. An interference proceeding is a proceeding before the USPTO to determine the priority among multiple patents or patent applications. Third parties may assert infringement claims against us based on existing patents or patents that may be granted in the future. If we are found to infringe a third-party's intellectual property rights, we could be required to obtain a license from such third-party to continue developing and marketing our products and technology. However, we may not be able to obtain any required license on commercially reasonable terms or at all.

Even if we were able to obtain a license, it could be non-exclusive, thereby giving our competitors access to the same technologies licensed to us. We could be forced, including by court order, to cease commercializing the infringing technology or product. In addition, we could be found liable for monetary damages. A finding of infringement could prevent us from commercializing our product candidates or force us to cease some of our business operations, which could materially harm our business. Claims that we have misappropriated the confidential information or trade secrets of third parties can have a similar negative impact on our business.

We may be unable to protect the confidentiality of our trade secrets, thus harming our business and competitive position.

In addition to our patented technology and products, we rely upon trade secrets, including unpatented know-how, technology and other proprietary information to develop and maintain our competitive position, which we seek to protect, in part, by confidentiality agreements with our employees and our collaborators and consultants. We also have agreements with our employees and selected consultants that obligate them to assign their inventions to us. However, it is possible that technology relevant to our business will be independently developed by a person that is not a party to such an agreement. Furthermore, if the employees, consultants or collaborators that are parties to these agreements breach or violate the terms of these agreements, we may not have adequate remedies for any such breach or violation, and we could lose our trade secrets through such breaches or violations. Further, our trade secrets could be disclosed, misappropriated or otherwise become known or be independently discovered by our competitors. In addition, intellectual property laws in foreign countries may not protect our intellectual property to the same extent as the laws of the United States. If our trade secrets are disclosed or misappropriated, it would harm our ability to protect our rights and have a material adverse effect on our business.

We may be subject to claims that our employees have wrongfully used or disclosed intellectual property of their former employers. Intellectual property litigation or proceeding could cause us to spend substantial resources and distract our personnel from their normal responsibilities.

Many of our employees were previously employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. 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 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 defending any such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. Even if we are successful in defending against such claims, litigation or other legal proceedings relating to intellectual property claims may cause us to incur significant expenses, and could distract our technical and management personnel from their normal responsibilities. In addition, there could be public announcements of the results of hearings, motions or other interim proceedings or developments and if securities analysts or investors perceive these results to be negative, it could have a substantial adverse effect on the price of our common stock. Such litigation or proceedings could substantially increase our operating losses and reduce our resources available for development activities. We may not have sufficient financial or other resources to adequately conduct such litigation or proceedings. Some of our competitors may be able to sustain the costs of such litigation or proceedings more effectively than we can because of their substantially greater financial resources. Uncertainties resulting from the initiation and continuation of patent litigation or other intellectual property related proceedings could have a material adverse effect on our ability to compete in the marketplace.

RISKS RELATED TO GOVERNMENT REGULATION

The regulatory approval process is expensive, time consuming and uncertain and may prevent us from obtaining approvals for the commercialization of some or all of our product candidates.

The research, testing, manufacturing, labeling, approval, selling, import, export, marketing and distribution of drug products are subject to extensive regulation by the FDA and other regulatory authorities in the United States and other countries, which regulations differ from country to country. We will not be permitted to market our product candidates in the United States until we receive approval of an NDA or a BLA, from the FDA. We have not submitted an application or received marketing approval for any of our product candidates. Obtaining approval of an NDA or BLA can be a lengthy, expensive and uncertain process. In addition, failure to comply with FDA and other applicable U.S. and foreign regulatory requirements may subject us to administrative or judicially imposed sanctions, including the following:

- warning letters;
- civil or criminal penalties and fines;
- injunctions;
- suspension or withdrawal of regulatory approval;
- suspension of any ongoing clinical studies;
- voluntary or mandatory product recalls and publicity requirements;

- refusal to accept or approve applications for marketing approval of new drugs or biologics or supplements to approved applications submitted by us;

- restrictions on operations, including costly new manufacturing requirements; or

- seizure or detention of our products or import bans.

Prior to receiving approval to commercialize any of our product candidates in the United States or abroad, we must demonstrate with substantial evidence from well-controlled clinical studies, and to the satisfaction of the FDA and other regulatory authorities abroad, that such product candidates are safe and effective for their intended uses. Results from preclinical studies and clinical studies can be interpreted in different ways. Even if we and our collaboration partners believe the preclinical or clinical data for our product candidates are promising, such data may not be sufficient to support approval by the FDA and other regulatory authorities. Administering any of our product candidates to humans may produce undesirable side effects, which could interrupt, delay or cause suspension of clinical studies of our product candidates and result in the FDA or other regulatory authorities denying approval of our product candidates for any or all targeted indications.

Regulatory approval of an NDA or BLA is not guaranteed, and the approval process is expensive and may take several years. The FDA also has substantial discretion in the approval process. Despite the time and expense exerted, failure can occur at any stage, and we could encounter problems that cause us to abandon or repeat clinical studies, or perform additional preclinical studies and clinical studies. The number of preclinical studies and clinical studies that will be required for FDA approval varies depending on the product candidate, the disease or condition that the product candidate is designed to address and the regulations applicable to any particular product candidate. The FDA can delay, limit or deny approval of a product candidate for many reasons, including, but not limited to, the following:

- a product candidate may not be deemed safe or effective;

- FDA officials may not find the data from preclinical studies and clinical studies sufficient;

- the FDA may find our manufacturing data insufficient to support approval

- the FDA might not approve our or our third-party manufacturer's processes or facilities; or

- the FDA may change its approval policies or adopt new regulations.

If any of our product candidates fails to demonstrate safety and efficacy in clinical studies or does not gain regulatory approval, our business and results of operations will be materially and adversely harmed.

Even if we receive regulatory approval for a product candidate, we will be subject to ongoing regulatory obligations and continued regulatory review, which may result in significant additional expense and subject us to penalties if we fail to comply with applicable regulatory requirements.

Once regulatory approval has been granted, the approved product and its manufacturer are subject to continual review by the FDA and non-U.S. regulatory authorities. Any regulatory approval that we or our collaboration partners receive for our product candidates may be subject to limitations on the indicated uses for which the product may be marketed or contain requirements for potentially costly post-marketing follow-up studies to monitor the safety and efficacy of the product. In addition, if the FDA or non-U.S. regulatory authorities approve any of our product candidates, we will be subject to extensive and ongoing regulatory requirements by the FDA and other regulatory authorities with regard to the labeling, packaging, adverse event reporting, storage, advertising, promotion and recordkeeping for our products. In addition, manufacturers of our drug products are required to comply with cGMP regulations, which include requirements related to quality control and quality assurance as well as the corresponding maintenance of records and documentation. Further, regulatory authorities must approve these manufacturing facilities before they can be used to manufacture our drug products, and these facilities are subject to continual review and periodic inspections by the FDA and other regulatory authorities for compliance with cGMP regulations. If we or a third party 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 authority may impose restrictions on that product, the manufacturer or us, including requiring withdrawal of the product from the market or suspension of manufacturing.

The regulatory requirements and policies may change and additional government regulations may be enacted for which we may also be required to comply. We cannot predict the likelihood, nature or extent of government regulation that may arise from future legislation or administrative action, either in the United States or in other countries. If we are not able to maintain regulatory compliance, we may not be permitted to market our future products and our business may suffer.

Unfavorable pricing regulations, third-party reimbursement practices or healthcare reform initiatives could harm our business.

There is increasing pressure on biotechnology companies to reduce healthcare costs. In the U.S., these pressures come from a variety of sources, such as managed care groups, institutional, and government purchasers. Increased purchasing power of entities that negotiate on behalf of federal healthcare programs and private sector beneficiaries could increase pricing pressures in the future. Such pressures may also increase the risk of litigation or investigation by the government regarding pricing calculations. The biotechnology industry will likely face greater regulation and political and legal action in the future.

The regulations that govern marketing approvals, pricing and reimbursement for new therapeutic products vary widely from country to country. Some countries require approval of the sale price of a product 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 might obtain regulatory approval for a product in a particular country, but then be subject to price regulations that delay our commercial launch of the product and negatively impact the revenue we are able to generate from the sale of the product in that country.

Adverse pricing limitations may hinder our ability to recoup our investment in one or more product candidates, even if our product candidates obtain regulatory approval. Adverse pricing limitations prior to approval will also adversely affect us by reducing our commercial potential. Our ability to commercialize any products successfully also will depend in part on the extent to which reimbursement for these products and related treatments becomes available from government health administration authorities, private health insurers and other organizations. Government authorities and third-party payors, such as private health insurers and health maintenance organizations, decide which medications they will pay for and establish reimbursement levels.

A primary trend in the U.S. healthcare industry and elsewhere is cost containment. Government authorities and these 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 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. Reimbursement may impact the demand for, or the price of, any product for which we obtain marketing approval. Obtaining reimbursement for our products may be particularly difficult because of the higher prices often associated with products administered under the supervision of a physician. If reimbursement is not available or is available only to limited levels, we may not be able to successfully commercialize any product candidate that we successfully develop.

There may be significant delays in obtaining reimbursement for approved products, and coverage may be more limited than the purposes for which the product is approved by the FDA or regulatory authorities in other countries. Moreover, eligibility for reimbursement does not imply that any product will be paid for in all cases or at a rate that covers our costs, including research, development, manufacture, sale and distribution. Interim payments for new products, if applicable, may also not be sufficient to cover our costs and may not be made permanent. Payment rates may vary according to the use of the product and the clinical setting in which it is used, may be based on payments allowed for lower cost products that are already reimbursed and may be incorporated into existing payments for other services. Net prices for products 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 products from countries where they may be sold at lower prices than in the United States. Third-party payors often rely upon Medicare coverage policy and payment limitations in setting their own reimbursement policies. Our inability to promptly obtain coverage and profitable payment rates from both government funded and private payors for new 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.

Failure to obtain regulatory approvals in foreign jurisdictions will prevent us from marketing our products internationally.

We may pursue commercialization of our future products in international markets, either through distribution and marketing partners or our own commercial organization. In order to market our future products in the European Economic Area, or EEA, and many other foreign jurisdictions, we must obtain separate regulatory approvals. Specifically, in the EEA, medicinal products can only be commercialized after obtaining a Marketing Authorization, or MA. Before granting the MA, the European Medicines Agency or the competent authorities of the member states of the EEA make an assessment of the risk-benefit balance of the product on the basis of scientific criteria concerning its quality, safety and efficacy.

We have had limited interactions with foreign regulatory authorities, and the approval procedures vary among countries and can involve additional clinical testing, and the time required to obtain approval may differ from that required to obtain FDA approval. Clinical studies conducted in one country may not be accepted by regulatory authorities in other countries. Approval by the FDA does not ensure approval by regulatory authorities in other countries, and approval by one or more foreign regulatory authorities does not ensure approval by regulatory authorities in other foreign countries or by the FDA. However, a failure or delay in obtaining regulatory approval in one country may have a negative effect on the regulatory process in others. The foreign regulatory approval process may include all of the risks associated with obtaining FDA approval. We may not obtain foreign regulatory approvals on a timely basis, if at all. We may not be able to submit for regulatory approvals and even if we submit we may not receive necessary approvals to commercialize our products in any market.

Healthcare reform measures could hinder or prevent our product candidates' commercial success.

In the United States, there have been and we expect there will continue to be a number of legislative and regulatory changes to the healthcare system in ways that could affect our future revenue and profitability and the future revenue and profitability of our potential customers. Federal and state lawmakers regularly propose and, at times, enact legislation that would result in significant changes to the healthcare system, some of which are intended to contain or reduce the costs of medical products and services. For example, one of the most significant healthcare reform measures in decades, the Patient Protection and Affordable Care Act, as amended by the Health Care and Education Affordability Reconciliation Act, collectively, the Affordable Care Act, was enacted in 2010. The Affordable Care Act contains a number of provisions, including those governing enrollment in federal healthcare programs, reimbursement changes and fraud and abuse measures, all of which will impact existing government healthcare programs and will result in the development of new programs. The Affordable Care Act, among other things:

- imposes a non-deductible annual fee on pharmaceutical manufacturers or importers who sell "branded prescription drugs," effective 2011;
- increases the minimum level of Medicaid rebates payable by manufacturers of brand-name drugs from 15.1% to 23.1%, effective 2011;
- could result in the imposition of injunctions;
- expanded Medicaid drug rebates to cover drugs paid by Medicaid managed care organizations;
- changes the Medicaid rebate rates for line extensions or new formulations of oral solid dosage form;
- expands the types of entities eligible for the "Section 340B discounts" for outpatient drugs;
- requires manufacturers to participate in a coverage gap discount program, under which they must agree to offer 50% point-of-sale discounts off negotiated prices of applicable branded 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; and
- creates a process for approval of biologic therapies that are similar or identical to approved biologics.

While the U.S. Supreme Court upheld the constitutionality of most elements of the Affordable Care Act in June 2012, other legal challenges are still pending final adjudication in several jurisdictions. In addition, Congress has in the past proposed and likely will continue to propose a number of legislative initiatives, including possible repeal of the Affordable Care Act. At this time, it remains unclear whether there will be any changes made to the Affordable Care Act, whether to certain provisions or its entirety. We cannot assure that the Affordable Care Act, as currently enacted or as amended in the future, will not adversely affect our business and financial results and we cannot predict how future federal or state legislative or administrative changes relating to healthcare reform will affect our business.

In addition, other legislative changes have been proposed and adopted since the Affordable Care Act was enacted. For example, the Budget Control Act of 2011, or Budget Control Act, among other things, created the Joint Select Committee on Deficit Reduction to recommend proposals in spending reductions to Congress. The Joint Select Committee did not achieve a targeted deficit reduction of at least $1.2 trillion for the years 2013 through 2021, which triggered the legislation's automatic reduction to several government programs, including aggregate reductions to Medicare payments to providers 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, or the ATRA, which delayed for another two months the budget cuts mandated by the sequestration provisions of the Budget Control Act. The ATRA, among other things, also reduced Medicare payments to several providers, including hospitals, and increased the statute of limitations period for the government to recover overpayments to providers from three to five years. In March 2013, the President signed an executive order implementing sequestration, and in April 2013, the 2% Medicare reductions went into effect. In December 2013, Congress amended the Budget Control Act to provide greater discretionary spending in 2014 and 2015 than originally budgeted and provide relief from the FDA user fee for two years. This amendment also extended the prohibition against reducing payments to Medicare providers by more than 2% until 2023. In December 2014, Congress passed the Consolidated and Further Continuing Appropriations Act, 2015 and a tax extenders bill, both of which may negatively impact coverage and reimbursement of healthcare items and services.

There likely will continue to be legislative and regulatory proposals at the federal and state levels directed at containing or lowering the cost of healthcare. We cannot predict the initiatives that may be adopted in the future or their full impact. The continuing efforts of the government, insurance companies, managed care organizations and other payors of healthcare services to contain or reduce costs of healthcare may adversely affect:

- our ability to set a price we believe is fair for our products;
- our ability to generate revenue and achieve or maintain profitability; and
- the availability of capital.

Further, changes in regulatory requirements and guidance may occur and we may need to amend clinical study protocols to reflect these changes. Amendments may require us to resubmit our clinical study protocols to Institutional Review Boards for reexamination, which may impact the costs, timing or successful completion of a clinical study. In light of widely publicized events concerning the safety risk of certain drug products, regulatory authorities, members of Congress, the Governmental Accounting Office, medical professionals and the general public have raised concerns about potential drug safety issues. These events have resulted in the recall and withdrawal of drug products, revisions to drug labeling that further limit use of the drug products and establishment of risk management programs that may, for instance, restrict distribution of drug products or require safety surveillance and/or patient education. The increased attention to drug safety issues may result in a more cautious approach by the FDA to clinical studies and the drug approval process. Data from clinical studies may receive greater scrutiny with respect to safety, which may make the FDA or other regulatory authorities more likely to terminate or suspend clinical studies before completion, or require longer or additional clinical studies that may result in substantial additional expense and a delay or failure in obtaining approval or approval for a more limited indication than originally sought.

Given the serious public health risks of high profile adverse safety events with certain drug products, the FDA may require, as a condition of approval, costly risk evaluation and mitigation strategies, which may include safety surveillance, restricted distribution and use, patient education, enhanced labeling, special packaging or labeling, expedited reporting of certain adverse events, preapproval of promotional materials and restrictions on direct-to-consumer advertising.

If we fail to comply with healthcare regulations, we could face substantial penalties and our business, operations and financial condition could be adversely affected.

Pharmaceutical companies are heavily regulated by federal, state and local regulations in the countries in which business activities occur. Even though we do not and will not control referrals of healthcare services or bill directly to Medicare, Medicaid or other third-party payors, certain federal and state healthcare laws and regulations pertaining to fraud and abuse and patients' rights are and will be applicable to our business. We could be subject to laws and regulations governing healthcare fraud and abuse, advertising and other promotional activities, data privacy and patient rights by both the federal government and the states in which we conduct our business. The regulations that may affect our ability to operate include, without limitation:

- the federal Anti-Kickback Statute, which prohibits, among other things, any person from knowingly and willfully offering, soliciting, receiving or providing remuneration, directly or indirectly, in exchange for or to induce either the referral of an individual for, or the purchase, order or recommendation of, any good or service for which payment may be made under federal healthcare programs, such as the Medicare and Medicaid programs;

- the federal Physician Payment Sunshine Act or Open Payments Program provisions and the implementing regulations which will require extensive tracking of physician and teaching hospital payments, maintenance of a payments database, and public reporting of the payment data;

- the federal False Claims Act, which prohibits, among other things, individuals or entities from knowingly presenting, or causing to be presented, false claims, or knowingly using false statements, to obtain payment from the federal government;

- federal criminal laws that prohibit executing a scheme to defraud any healthcare benefit program or making false statements relating to healthcare matters;

- the Foreign Corrupt Practices Act and similar statutes and regulations in foreign jurisdictions, which makes it unlawful for certain classes of persons and entities to make payments to foreign government officials to assist in obtaining or retaining business;

- the federal Health Insurance Portability and Accountability Act of 1996, as amended by the Health Information Technology for Economic and Clinical Health Act, which governs the conduct of certain electronic healthcare transactions and protects the security and privacy of protected health information; and

- state law equivalents of each of the above federal laws, such as anti-kickback and false claims laws which may apply to items or services reimbursed by any third-party payor, including commercial insurers.

The Affordable Care Act, among other things, amends the intent requirement of the Federal Anti-Kickback Statute and criminal healthcare fraud statutes. A person or entity no longer needs to have actual knowledge of this statute or specific intent to violate it. 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 False Claims Act.

If our operations are found to be in violation of any of the laws described above or any other governmental regulations that apply to us, we may be subject to penalties, including civil and criminal penalties, damages, fines and the curtailment or restructuring of our operations. Any penalties, damages, fines, curtailment or restructuring of our operations could adversely affect our ability to operate our business and our financial results. Any action against us for violation of these laws, even if we successfully defend against it, could cause us to incur significant legal expenses and divert our management's attention from the operation of our business. Moreover, achieving and sustaining compliance with applicable federal and state privacy, security and fraud laws may prove costly.

RISKS RELATED TO OWNERSHIP OF OUR COMMON STOCK

Our stock price may be volatile, and investors in our common stock could incur substantial losses.

Our stock price has fluctuated in the past and may be volatile in the future. The stock market in general, and the market for biotechnology companies in particular, have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. As a result of this volatility, investors may experiences losses on their investment in our stock. The market price for our common stock may be influenced by many factors, including the following:

- announcements by us or our competitors of significant acquisitions, strategic partnerships, joint ventures or capital commitments;
- market conditions in the pharmaceutical and biotechnology sectors;
- actual or anticipated changes in earnings estimates or changes in stock market analyst recommendations regarding our common stock, other comparable companies or our industry generally;
- trading volume of our common stock;
- sales of our common stock by us or our stockholders;
- general economic, industry and market conditions; and
- the other risks described in this "Risk factors" section.

These broad market and industry factors may seriously harm the market price of our common stock, regardless of our operating performance. In the past, following periods of volatility in the market, securities class-action litigation has often been instituted against companies. Such litigation, if instituted against us, could result in substantial costs and diversion of management's attention and resources, which could materially and adversely affect our business, financial condition, results of operations and growth prospects.

Our executive officers, directors and principal stockholders have the ability to significantly influence all matters submitted to stockholders for approval.

Based, in part, on a review of SEC filings, we believe that our executive officers, directors and stockholders who own more than 5% of our outstanding common stock beneficially own close to half of our outstanding shares of common stock, based on shares of common stock outstanding as of December 31, 2014. As a result, if these stockholders were to choose to act together, they would be able to significantly influence all matters submitted to our stockholders for approval, as well as our management and affairs. For example, these stockholders, if they choose to act together, will significantly influence the election of directors and approval of any merger, consolidation or sale of all or substantially all of our assets. This concentration of voting power could delay or prevent an acquisition of our company on terms that other stockholders may desire.

If securities or industry analysts do not publish research, or publish inaccurate or unfavorable research, about our business, our stock price and trading volume could decline.

The trading market for our common stock depends, in part, on the research and reports that securities or industry analysts publish about us or our business. Securities and industry analysts may cease to publish research on our company at any time in their discretion. If one or more of these analysts cease coverage of our company or fail to publish reports on us regularly, demand for our stock could decrease, which might cause our stock price and trading volume to decline. In addition, if one or more of the analysts who cover us downgrade our stock or publish inaccurate or unfavorable research about our business, our stock price would likely decline. If our operating results fail to meet the forecast of analysts, our stock price will likely decline.

Provisions in our corporate charter documents and under Delaware law could make an acquisition of us more difficult and may prevent attempts by our stockholders to replace or remove our current management.

Provisions in our corporate charter and our bylaws may discourage, delay or prevent a merger, acquisition or other change in control of us that stockholders may consider favorable, including transactions in which stockholders might otherwise receive a premium for their shares. These provisions could also limit the price that investors might be willing to pay in the future for shares of our common stock, thereby depressing the market price of our common stock. In addition, 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. Because our board of directors is responsible for appointing the members of our management team, these provisions could in turn affect any attempt by our stockholders to replace current members of our management team. Among others, these provisions include the following:

- our board of directors is divided into three classes with staggered three-year terms which may delay or prevent a change of our management or a change in control;
- our board of directors has the right to elect directors to fill a vacancy created by the expansion of the board of directors or the resignation, death or removal of a director, which prevents stockholders from being able to fill vacancies on our board of directors;
- our stockholders may not act by written consent or call special stockholders' meetings; as a result, a holder, or holders, controlling a majority of our capital stock would not be able to take certain actions other than at annual stockholders' meetings or special stockholders' meetings called by the board of directors, the chairman of the board, the chief executive officer or the president;
- our certificate of incorporation prohibits cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- stockholders must provide advance notice and additional disclosures in order to nominate individuals for election to the board of directors or to propose matters that can be acted upon at a stockholders' meeting, which may discourage or deter a potential acquirer from conducting a solicitation of proxies to elect the acquirer's own slate of directors or otherwise attempting to obtain control of our company; and
- our board of directors may issue, without stockholder approval, shares of undesignated preferred stock; the ability to issue undesignated preferred stock makes it possible for our board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to acquire us.

Moreover, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which prohibits a person who owns in excess of 15% of our outstanding voting stock from merging or combining with us for a period of three years after the date of the transaction in which the person acquired in excess of 15% of our outstanding voting stock, unless the merger or combination is approved in a prescribed manner.

Our employment agreements with our executive officers may require us to pay severance benefits to any of those persons who are terminated in connection with a change in control of us, which could harm our financial condition or results.

Certain of our executive officers are parties to employment agreements that contain change in control and severance provisions providing for aggregate cash payments of up to approximately $2.4 million for severance and other benefits and acceleration of vesting of stock options with a value of approximately $39.3 million as of December 31, 2014, based on the closing price of our common stock of $28.32 on such date in the event of a termination of employment in connection with a change in control of us. The accelerated vesting of options could result in dilution to our existing stockholders and harm the market price of our common stock. The payment of these severance benefits could harm our financial condition and results. In addition, these potential severance payments may discourage or prevent third parties from seeking a business combination with us.

Because we do not anticipate paying any cash dividends on our common stock in the foreseeable future, capital appreciation, if any, will be our stockholders' sole source of gain.

We have never declared or paid cash dividends on our common stock. We currently intend to retain all of our future earnings, if any, to finance the growth and development of our business. In addition, the terms of existing or any future debt agreements may preclude us from paying dividends. As a result, capital appreciation, if any, of our common stock will be our stockholders' sole source of gain for the foreseeable future.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

We lease approximately 60,000 square feet of research and office space in South San Francisco, California under a lease that expires in March 2020. Thereafter, at our option, we may extend the term for an additional three years to March 2023. We believe that our existing facilities are sufficient for our current needs for the foreseeable future.

ITEM 3. LEGAL PROCEEDINGS

We are not currently a party to any material legal proceedings.

ITEM 4. MINE SAFETY DISCLOSURES

None.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

PRICE RANGE OF COMMON STOCK

Our common stock has been listed on The NASDAQ Global Market under the symbol "PTLA" since May 22, 2013. Prior to that date, there was no public trading market for our common stock. Our initial public offering was priced at $14.50 per share on May 22, 2013. The following table sets forth for the periods indicated the high and low sales prices per share of our common stock as reported on The NASDAQ Global Market:

	Low	High
Fiscal Year ending December 31, 2013		
Second Quarter (beginning May 22, 2013)	$ 14.75	$ 26.12
Third Quarter	$ 20.15	$ 28.77
Fourth Quarter	$ 20.72	$ 30.95
Fiscal Year ending December 31, 2014		
First Quarter	$ 23.00	$ 30.39
Second Quarter	$ 19.59	$ 30.58
Third Quarter	$ 23.34	$ 31.48
Fourth Quarter	$ 24.75	$ 31.38

On February 27 2015, the last reported sale price of our common stock as reported on The NASDAQ Global Market was $38.08 per share.

As of February 27 2015, there were 48,952,668 shares of our common stock issued and outstanding with 32 holders of record of our common stock. The actual number of stockholders is greater than this number of record holders, and includes stockholders who are beneficial owners, but whose shares are held in street name by brokers and other nominees. This number of holders of record also does not include stockholders whose shares may be held in trust by other entities.

STOCK PRICE PERFORMANCE GRAPH

The following stock performance graph compares our total stock return with the total return for (i) the NASDAQ Composite Index and the (ii) the [NASDAQ Biotechnology Index] for the period from May 22, 2013 (the date our common stock commenced trading on the NASDAQ Global Market) through December 31, 2014. The figures represented below assume an investment of $100 in our common stock at the closing price of $15.15 on May 22, 2013 and in the NASDAQ Composite Index and the NASDAQ Biotechnology Index on May 22, 2013 and the reinvestment of dividends into shares of common stock. The comparisons in the table are required by the Securities and Exchange Commission, or SEC, and are not intended to forecast or be indicative of possible future performance of our common stock. This graph shall not be deemed "soliciting material" or be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, or the Exchange Act, or otherwise subject to the liabilities under that Section, and shall not be deemed to be incorporated by reference into any of our filings under the Securities Act of 1933, as amended, or the Securities Act, whether made before or after the date hereof and irrespective of any general incorporation language in any such filing.

$100 investment in stock or index	Ticker	May 22, 2013	June 30, 2013	September 30, 2013	December 31, 2013
Portola Pharmaceuticals, Inc.....	PTLA	$ 100.00	$ 162.08	$ 176.57	$ 169.97
NASDAQ Composite Index	IXIC	$ 100.00	$ 96.08	$ 115.99	$ 125.56
NASDAQ Biotechnology Index .	NBI	$ 100.00	$ 98.27	$ 108.90	$ 120.60

$100 investment in stock or index	Ticker	March 31, 2014	June 30, 2014	September 30, 2014	December 31, 2014
Portola Pharmaceuticals, Inc.....	PTLA	$ 170.96	$ 192.61	$ 166.86	$ 186.93
NASDAQ Composite Index	IXIC	$ 121.24	$ 127.28	$ 129.74	$ 136.75
NASDAQ Biotechnology Index .	NBI	$ 130.83	$ 142.35	$ 151.50	$ 168.38

DIVIDEND POLICY

We have never declared or paid, and do not anticipate declaring, or paying in the foreseeable future, any cash dividends on our capital stock. Future determination as to the declaration and payment of dividends, if any, will be at the discretion of our board of directors and will depend on then existing conditions, including our operating results, financial conditions, contractual restrictions, capital requirements, business prospects and other factors our board of directors may deem relevant.

USE OF PROCEEDS

On May 21, 2013, our registration statement on Form S-1 (File No. 333-187901) was declared effective for our initial public offering. As a result of our initial public offering and the exercise of the overallotment option, both of which closed on May 28, 2013, we received net proceeds of approximately $131.0 million, after underwriting discounts and commissions of approximately $9.4 million. In addition, we incurred other expenses associated with our initial public offering of approximately $5.2 million. No payments for such expenses were made directly or indirectly to any of our officers or directors.

On October 16, 2013, our registration statement on Form S-1 (File No. 333-191609) was declared effective for our follow-on public offering. As a result of our follow-on public offering and the exercise of the overallotment which closed on October 22, 2013 and November 14, 2013, respectively, we received net proceeds of approximately $120.8 million, after underwriting discounts and commissions of approximately $7.7 million. We did not receive any proceeds from the sale of common stock by certain of our existing stockholders in the follow-on public offering. In addition, we incurred other expenses associated with our follow-on public offering of approximately $0.9 million. No payments for such expenses were made directly or indirectly to any of our officers or directors.

On October 8, 2014, we closed an underwritten public offering of 6,200,000 shares of our common stock, at a public offering price of $26.00 per share. In addition, on October 8, 2014, the underwriters of the offering exercised their over-allotment option to purchase an additional 930,000 shares from us at the public offering price. The offer and sale of all of the shares in the offering were registered under the Securities Act pursuant to an automatically effective registration statement on Form S-3 ASR (File No. 333-199094). The net proceeds from the offering to us including the over-allotment option, net of underwriting discounts and commissions of approximately $10.2 million, were approximately $175.2 million. We did not receive any proceeds from the sale of common stock by certain of our existing stockholders in the follow-on public offering. In addition, we incurred other expenses associated with our follow-on public offering of approximately $0.6 million. No payments for such expenses were made directly or indirectly to any of our officers or directors.

The net proceeds from the offerings described above have been used and will be used, together with our cash, cash equivalents and investments, to fund continued advancement of our Betrixaban, Andexanet alfa and Cerdulatinib programs, anticipated to be approximately $200.0 million, with the balance to be used to fund working capital, capital expenditures and other general corporate purposes, which may include the acquisition or licensing of other products, businesses or technologies.

There has been no material change in the planned use of proceeds from our initial public offering as described in our prospectus dated May 22, 2013, filed with the SEC pursuant to Rule 424(b) of the Securities Act, the planned use of proceeds from our public offering as described in our prospectus dated October 17, 2013, filed with the SEC pursuant to Rule 424(b) of the Securities Act or the planned use of proceeds from our public offering as described in our prospectus dated October 2, 2014, filed with the SEC pursuant to Rule 424(b) of the Securities Act.

ISSUER PURCHASES OF EQUITY SECURITIES

None.

ITEM 6. SELECTED FINANCIAL DATA

You should read the following consolidated selected financial data together with the section of this report entitled "Management's discussion and analysis of financial condition and results of operations" and our consolidated financial statements and the related notes included in this report. The consolidated statement of operations data for the years ended December 31, 2014, 2013 and 2012 and the consolidated balance sheet data as of December 31, 2014 and 2013 are derived from our audited consolidated financial statements included elsewhere in this Annual Report on Form 10-K. The consolidated statements of operations data for the years ended December 31, 2011 and 2010, and the consolidated balance sheet data as of December 31, 2012, 2011 and 2010 were derived from our audited consolidated financial statements that are not included in this Annual Report on Form 10-K.

	Year Ended December 31,				
	2014	2013	2012	2011	2010
Consolidated statements of operations data:					
Collaboration and license revenue	$ 9,625	$ 10,531	$ 72,042	$ 78,029	$ 35,268
Operating expenses:					
Research and development	123,639	79,286	49,717	46,089	43,260
General and administrative	23,552	15,423	11,469	12,071	10,762
Total operating expenses	147,191	94,709	61,186	58,160	54,022
Income (loss) from operations	(137,566)	(84,178)	10,856	19,869	(18,754)
Interest and other income, net	441	826	510	136	1,659
Interest expense	–	–	–	(21)	(380)
Income (loss) before income taxes	(137,125)	(83,352)	11,366	19,984	(17,475)
Provision for income taxes	–	–	–	–	2,794
Net income (loss)	$ (137,125)	$ (83,352)	$ 11,366	$ 19,984	$ (20,269)
Net income (loss) attributable to common stockholders:					
Basic	$ (137,125)	$ (83,352)	$ –	$ 79	$ (20,269)
Diluted	$ (137,125)	$ (83,352)	$ –	$ 127	$ (20,269)
Net income (loss) per share attributable to common stockholders:					
Basic	$ (3.19)	$ (3.65)	$ –	$ 0.06	$ (16.79)
Diluted	$ (3.19)	$ (3.65)	$ –	$ 0.06	$ (16.79)
Shares used to compute net income (loss) per share attributable to common stockholders:					
Basic	42,977,463	22,842,443	1,350,939	1,249,778	1,207,106
Diluted	42,977,463	22,842,443	2,048,867	2,089,206	1,207,106

(1) To date, substantially all of our revenue has been generated from our collaboration agreements, and we have not generated any commercial product revenue. Revenue in the year ended December 31, 2011 includes $8.3 million that represents the recognition of all remaining deferred revenue following the termination of an exclusive worldwide license and collaboration agreement with Merck & Co., Inc., effective September 30, 2011. Revenue in the year ended December 31, 2012 includes $65.1 million that represents the recognition of all remaining deferred revenue following the termination of an exclusive worldwide license agreement with Novartis Pharma A.G., effective July 1, 2012. See the section of this report entitled "Management's discussion and analysis of financial condition and results of operations—Financial operations overview—Revenue" for a more detailed description of our revenue recognition with respect to our collaboration agreements.

	As of December 31,				
	2014	2013	2012	2011	2010
Consolidated balance sheet data:					
Cash, cash equivalents and investments	$ 392,303	$ 319,036	$ 137,384	$ 188,089	$ 101,417
Restricted cash	–	–	–	–	6,000
Working capital	273,946	247,153	116,089	169,128	55,659
Total assets	416,495	325,731	146,001	193,403	113,658
Convertible preferred stock	–	–	317,280	317,280	220,374
Total stockholders' equity (deficit)	347,802	296,335	(191,569)	(206,105)	(228,407)

ITEM 7. 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 of this report entitled "Selected financial data" and our financial statements and related notes included elsewhere in this report. This discussion and other parts of this report contain forward-looking statements that involve risk and uncertainties, such as statements of our plans, objectives, expectations and intentions. Our actual results could differ materially from those discussed in these forward-looking statements. Factors that could cause or contribute to such differences include, but are not limited to, those discussed in the section of this report entitled "Risk factors."

Overview

We are a biopharmaceutical company focused on the development and commercialization of novel therapeutics in the areas of thrombosis, other hematologic disorders and inflammation for patients who currently have limited or no approved treatment options. We are advancing our three wholly-owned compounds using novel biomarker and genetic approaches that may increase the likelihood of clinical, regulatory and commercial success of our potentially life-saving therapies. Our two lead programs address significant unmet medical needs in the area of thrombosis, or blood clots. Our first lead compound Betrixaban is a novel oral once-daily inhibitor of Factor Xa in Phase 3 clinical trials for extended duration prophylaxis, or preventive treatment, of a form of thrombosis known as venous thromboembolism, or VTE, in acute medically ill patients for 35 days of in-hospital and post-discharge use. Our second lead compound Andexanet alfa, a Food and Drug Administration, or FDA-designated breakthrough therapy, is a recombinant protein designed to reverse the anticoagulant activity in patients treated with a Factor Xa inhibitor. Andexanet alfa has potential indications to treat patients who are taking a direct or indirect Factor Xa inhibitor and who suffer a major bleeding episode or require emergency surgery. Andexanet alfa is currently being evaluated in Phase 3 and Phase 4 clinical trials. Our third product candidate, Cerdulatinib, is an orally available kinase inhibitor that inhibits spleen tyrosine kinase, or Syk, and janus kinases, or JAK, enzymes that regulate important signaling pathways. Cerdulatinib is being developed for hematologic, or blood, cancers and inflammatory disorders. We are currently in a Phase 1/2a proof-of-concept study for Cerdulatinib in patients with non-Hodgkin's lymphoma, or NHL, or chronic lymphocytic leukemia, or CLL, who have failed or relapsed on existing marketed therapies or products in development, including patients with identified mutations. In the Phase 1 dose escalation portion of the study, we have yet to reach the maximum tolerated dose and enrollment continues. Based on interim Phase 1 data, we are advancing Cerdulatinib to the Phase 2a portion of the study which includes expansion cohorts for which we expect to begin enrollment in 2015. We also have a program of highly selective Syk inhibitors which is partnered with Biogen Idec Inc., or Biogen.

Our product candidates and collaboration agreements

Betrixaban

Betrixaban is a novel oral once-daily inhibitor of Factor Xa in development for extended duration VTE prophylaxis in acute medically ill patients for 35 days of in-hospital and post-discharge use. Acute medically ill patients are those who are hospitalized for serious non-surgical conditions, such as heart failure, stroke, infection, rheumatic disorders and pulmonary disorders. Our pivotal biomarker-based Phase 3 study of Betrixaban, or APEX, is a randomized, double-blind, active-controlled, multicenter, multinational study evaluating a once-daily dose of Betrixaban for 35 days for superiority as compared to in-hospital administration of enoxaparin once daily for 6 to 14 days followed by placebo, for extended VTE prophylaxis in acute medically ill patients with restricted mobility and other risk factors. Our APEX study is over 70% enrolled in 35 countries worldwide. We believe that Betrixaban has several clinically important pharmacological properties that differentiate it from injectable enoxaparin and other oral Factor Xa inhibitors, including low renal clearance, a metabolic profile that limits drug-drug interaction, and a long half-life. Based on current enrollment, we expect our current Phase 3 APEX study of Betrixaban to complete patient enrollment by the end of 2015.

Andexanet alfa

Andexanet alfa, an FDA-designated breakthrough therapy, is a recombinant protein designed to reverse the anticoagulant activity in patients treated with a Factor Xa inhibitor. Andexanet alfa has potential indications to treat patients who are taking a direct or indirect Factor Xa inhibitor and who suffer a major bleeding episode or require emergency surgery. Currently, there is no antidote or reversal agent approved for use against Factor Xa inhibitors.

Andexanet alfa is the first therapy to demonstrate reversal of the anticoagulant activity of Factor Xa inhibitors as measured by anti-Factor Xa levels. We are currently evaluating Andexanet alfa in two Phase 3 ANNEXA™ (Andexanet Alfa a Novel Antidote to the Anticoagulant Effects of fXA Inhibitors) studies – one with BMS and Pfizer's Factor Xa inhibitor, apixaban, and one with Bayer and Janssen's Factor Xa inhibitor, rivaroxaban. Our Phase 3 studies consist of two parts. In the first part of each study, the effect of a single bolus of Andexanet alfa was evaluated in healthy volunteers who had been given apixaban or rivaroxaban. In the second part of each study, the ability of Andexanet alfa to sustain reversal of the anticoagulant effects of apixaban and rivaroxaban will be evaluated by administering a bolus plus infusion of Andexanet alfa to healthy volunteers who have been given apixaban or rivaroxaban. The first part of our Phase 3 ANNEXA™ studies of a single bolus of Andexanet alfa with apixaban and with rivaroxaban both met their primary and secondary endpoints with high statistical significance (p-values of less than 0.0001). The second part of our Phase 3 ANNEXA™ studies is ongoing.

In early 2015, we initiated a Phase 4 confirmatory patient study, or ANNEXA-4, as agreed to by the FDA and EMA as part of an Accelerated Approval pathway for Andexanet alfa. This open-label, single-arm study is being conducted in patients receiving apixaban, rivaroxaban or enoxaparin (a low molecular weight heparin) who present with an acute major bleed. Pursuant to discussions with the FDA, we plan to include data from a small number of patients from this study in our Biologics License Application, or BLA, which we expect to submit in 2015 for conditional approval.

We completed a series of Phase 2 proof-of-concept studies evaluating the safety and activity of Andexanet alfa in healthy volunteers who were administered one of several Factor Xa inhibitors. Analysis of anticoagulation markers in blood samples taken from the subjects in these studies demonstrated that Andexanet alfa produced immediate reversal of anticoagulant activity of the Factor Xa inhibitors apixaban, rivaroxaban and enoxaparin and that the reversal could be sustained. Additionally, we are conducting a Phase 2 proof-of-concept study evaluating the reversal of edoxaban and we plan to initiate a Phase 2 study evaluating the reversal of Betrixaban.

Our current Phase 2 and Phase 3 studies are using clinical material from CMC Biologics, Inc., or CMC Biologics, who will also support our BLA submission and initial commercial launch in the U.S. For large-scale manufacturing of Andexanet alfa, we signed an agreement in June 2013 with Lonza Group Ltd, or Lonza. However, the first commercial material from Lonza will not become available until after our expected U.S. launch. In July 2014, we entered into a commercial supply agreement with CMC Biologics to increase their production capacity at a lower cost than that of our current clinical supply for Andexanet alfa. Total fixed commitments under the agreement for the purchases of clinical and commercial batches, not taking into account possible price and batch adjustments, are $293.9 million over the life of the agreement from 2015 through 2021. We do not anticipate that supply from CMC Biologics, even as expanded, will be sufficient to meet projected worldwide demand for Andexanet alfa, therefore, we must also develop an improved and more cost-effective process at Lonza. In October 2014, we entered into a manufacturing supply agreement with Lonza, replacing the 2013 agreement, to increase our production capacity and to enhance our manufacturing process at Lonza to support broader worldwide supply following our potential BLA filing. Under this manufacturing supply agreement, we will be required to purchase at least seven commercial batches of Andexanet alfa from Lonza, for a period of five years, following our first regulatory approval.

In February 2013, we entered into a three-way agreement with Bayer and Janssen to include subjects dosed with rivaroxaban, their jointly owned Factor Xa inhibitor product, in one of our proof-of-concept studies of Andexanet alfa. See the section of this report entitled "Business—Collaboration and license agreements—Bayer and Janssen agreements" for a more detailed description of this agreement. We are responsible for the cost of conducting this clinical study. Under the terms of the agreement, Bayer and Janssen have each provided us with an upfront and non-refundable fee of $2.5 million, for an aggregate fee of $5.0 million. The agreement also provides for additional non-refundable payments to us from Bayer and Janssen of $250,000 each for an aggregate fee of $500,000 following the delivery of the final written study report of our Phase 2 proof-of-concept studies of Andexanet alfa. We are also obligated to participate on a Joint Collaboration Committee, or JCC, with Bayer and Janssen to oversee the collaboration activities under the agreement. We originally estimated the period of performance of our obligations to extend through the fourth quarter of 2013. We have added cohorts that were not planned as part of the initial study design at the inception of the agreement and therefore revised our estimated period of performance to now be through 2015. The total consideration under this agreement of $5.5 million was recognized as revenue on a straight-line basis over the estimated performance period through the end of 2014.

In June 2013, we entered into an agreement with Daiichi Sankyo, Inc., or Daiichi Sankyo, to include subjects dosed with edoxaban, Daiichi Sankyo's Factor Xa inhibitor product, in one of our proof-of-concept studies of Andexanet alfa. We are responsible for the cost of conducting this clinical study. Under the terms of the agreement, Daiichi Sankyo provided us with an upfront fee of $6.0 million. Daiichi Sankyo may terminate the agreement at any time. The total consideration under this agreement of $6.0 million was received in July 2013. We are obligated to perform preclinical proof-of-concept studies and participate on a JCC with Daiichi Sankyo to oversee the collaboration activities under the agreement. We originally estimated the non-contingent period of performance to be through the second quarter of 2014. In December 2013, the JCC agreed to forego certain preclinical studies that were planned in the original study design at the inception of the agreement. As a result of this change, we revised our estimated period of performance to be through the first quarter of 2014. The total non-contingent consideration under this agreement of $3.0 million was recognized as revenue on a straight-line basis over our estimated non-contingent performance period through the first quarter of 2014. The contingent consideration under this agreement of $3.0 million commenced upon resolution of the contingency in the first quarter of 2014 and is being recognized over the remaining estimated period of performance through the fourth quarter of 2015.

In January 2014, we entered into a second collaboration agreement with BMS and Pfizer to further study the safety and efficacy of Andexanet alfa as a reversal agent to apixaban, through our Phase 3 studies. We initiated Phase 3 studies in the first half of 2014. Under the terms of the Phase 3 agreement, we received an upfront payment of $13.0 million, subject to a 50% refund provision, and are eligible to receive additional development and regulatory milestone and contingent payments of up to $12.0 million, subject to a 50% refund provision. These payments represent the total consideration under this agreement. BMS and Pfizer will continue to provide development and regulatory guidance for the program. Under both agreements with BMS and Pfizer, we retain full, worldwide development and commercial rights to Andexanet alfa. This Phase 3collaboration agreement will continue in force until the approval of Andexanet alfa as a reversal agent for apixaban by the FDA and EMA. BMS and Pfizer may terminate this agreement for convenience with 60 days' advance written notice or for our bankruptcy or change of control. In addition, either party may terminate this agreement for the other party's uncured material breach, material safety issues, or failure of the Phase 3 studies.

In February 2014, we entered into a second collaboration agreement with Bayer and Janssen to further study the safety and efficacy of Andexanet alfa as a reversal agent to rivaroxaban through our Phase 3 studies. Our original collaboration agreement with Bayer and Janssen, covers the conduct of a Phase 2 proof-of-concept study. The second collaboration agreement covers the conduct of Phase 3 studies of Andexanet alfa with rivaroxaban and any potential U.S. and EU regulatory approval of Andexanet alfa as reversal agent of rivaroxaban. The Phase 3 studies are currently ongoing. Under this second collaboration agreement, we received an upfront payment of $10.0 million and are eligible to receive additional development and regulatory milestone payments of up to $15.0 million. These payments represent the total consideration under this agreement. The total upfront consideration under this agreement is being recognized as revenue on a straight-line basis over the estimated period of performance period. In the third quarter of 2014 we updated our estimated period of performance from the first quarter of 2017 to the first quarter of 2018 to reflect a modification to our clinical development and regulatory plans. Bayer and Janssen will continue to provide development and regulatory guidance for the program.

Under both agreements with Bayer and Janssen, we retain full, worldwide development and commercial rights to Andexanet alfa. This Phase 3 collaboration agreement will continue in force until the approval of Andexanet alfa as a reversal agent for rivaroxaban by the FDA and EMA. Bayer and Janssen may terminate this agreement for convenience with 60 days' advance written notice or for our bankruptcy or change of control. In addition, either party may terminate this agreement for the other party's uncured material breach or material safety issues, or we can also terminate this agreement for failure of the Phase 3 studies.

In July 2014, we entered into a second collaboration agreement with Daiichi Sankyo to further study the safety and efficacy of Andexanet alfa as a reversal agent to edoxaban through Phase 3 studies. The second collaboration agreement covers the conduct of Phase 3 studies of Andexanet alfa with edoxaban and any potential U.S. and EU regulatory approval of Andexanet alfa as a reversal agent for edoxaban. Under this Phase 3 collaboration agreement we received an upfront payment of $15.0 million and are eligible to receive additional development and regulatory milestone payments of up to $25.0 million. These payments represent the total consideration under this agreement. The total upfront consideration under this agreement is being recognized as revenue on a straight-line basis over the estimated performance period through the third quarter of 2018. Daiichi Sankyo will continue to provide development and regulatory guidance for the program.

Under both agreements with Daiichi Sankyo, we retain full, worldwide development and commercial rights to Andexanet alfa.

This Phase 3 collaboration agreement will continue in force until the approval of Andexanet alfa as a reversal agent for edoxaban by the FDA and EMA. Bayer and Janssen may terminate this agreement for convenience with 60 days' advance written notice or for our bankruptcy or change of control. In addition, either party may terminate this agreement for the other party's uncured material breach or material safety issues or we can also terminate this agreement for failure of the Phase 3 studies.

Cerdulatinib

In addition to our thrombosis products, we are developing an orally available kinase inhibitor to treat hematologic disorders and inflammation. Cerdulatinib is an orally available, potent dual spleen tyrosine kinase (Syk) and janus kinase (JAK) inhibitor. Scientists have demonstrated that both Syk and JAK play key roles in various hematologic cancers and inflammatory diseases. We are developing Cerdulatinib for treatment of certain B-cell hematologic cancers, with a particular focus on patients who have NFkB activating mutations or acquired mutations to other novel B-cell targeted therapies that cause treatment failure or disease relapse. Cerdulatinib has completed preclinical testing and has demonstrated in-vitro activity in cancer cell lines with NFkB activating mutations and in patient tumor samples with acquired mutations to novel B-cell targeted drug candidates. In October 2013, we initiated a Phase 1/2a proof-of-concept study in non-Hodgkin's lymphoma, or NHL, and chronic lymphocytic leukemia, or CLL, patients. In the Phase 1 dose escalation portion of the study, we have yet to reach the maximum tolerated dose and enrollment continues. Based on interim Phase 1 data, we are advancing Cerdulatinib to the Phase 2a portion of the study which includes expansion cohorts for which we expect to begin enrollment in 2015.

Selective Syk inhibitors

We have a program of highly selective Syk inhibitors which is partnered with Biogen Idec Inc. Biogen Idec is leading the pre-clinical study of highly selective Syk inhibitors for allergic asthma and other inflammatory disorders and is responsible for all development-related expenses. Syk is an important mediator of immune response in a number of different types of immune cells. Our selective Syk inhibitors have been successfully evaluated in 131 subjects in several Phase 1 clinical studies. Biogen Idec Inc., or Biogen Idec, is leading the pre-clinical study of selective Syk inhibitors for allergic asthma and other inflammatory disorders and is responsible for all development-related expenses.

In October 2011, we entered into an exclusive, worldwide license and collaboration agreement with Biogen Idec to develop and commercialize selective Syk kinase inhibitors for the treatment of autoimmune and inflammatory diseases. Under this agreement, Biogen Idec is responsible for all development-related expenses. In April 2014, we entered into an amendment to the Biogen Idec license and collaboration agreement under which Biogen Idec released to us one of the Syk kinase inhibitors for use in topical ophthalmic indications.

Other

Prior to 2012, we were developing Elinogrel, a novel anti-platelet agent. In February 2009, we entered into a worldwide collaboration and license agreement with Novartis Pharma A.G., or Novartis, to develop and commercialize Elinogrel. Novartis made an upfront cash payment to us of $75.0 million, and the agreement also provided for additional payments based on the achievement of certain development, regulatory and commercialization milestones. In April 2012, we and Novartis agreed to a plan for Novartis to return all rights to Elinogrel to us and to terminate our agreement, effective July 1, 2012. As of the time of termination, no milestones had been achieved and no royalties had been triggered pursuant to our agreement with Novartis. Although we may resume development of Elinogrel in the future, we currently do not plan to do so.

For purposes of this discussion and analysis of our financial condition and results of operations, we refer to our agreements with Lee's, BMS and Pfizer, Bayer and Janssen, Daiichi Sankyo, Aciex, Biogen Idec, and Novartis collectively as our collaboration agreements.

Financial operations overview

Revenue

Our revenue to date has been generated primarily from collaboration and license revenue pursuant to our collaboration agreements. We have not generated any revenue from commercial product sales to date. Since inception, in connection with our agreements with Biogen Idec, Merck & Co., Inc., Novartis, BMS and Pfizer, Bayer and Janssen, Daiichi Sankyo and Lee's, we have received payments in the aggregate amount of $219.7 million, as initial upfront payments, contingent consideration and a milestone payment of which $6.5 million is subject to a 50% refund provision, pursuant to our Phase 3 clinical collaboration agreement with BMS and Pfizer. We recognize revenue from payments ratably over the term over the term of our estimated period of performance under the agreements if we have a performance obligation, or immediately if there is stand-alone value for any delivered item.

We may also be entitled to additional milestone payments and other contingent payments upon the occurrence of specific events. Due to the nature of these collaboration agreements and the nonlinearity of the earnings process associated with certain payments and milestones, we expect that our revenue will continue to fluctuate in future periods.

The following table summarizes the sources of our revenue for the years ended December 31, 2014, 2013 and 2012, in thousands:

	Year Ended December 31,		
	2014	2013	2012
Novartis:			
Recognition of upfront license fee	$ –	$ –	$ 53,846
Reimbursement of research and development expense	–	–	16,238
Novartis total	–	–	70,084
BMS and Pfizer:			
Recognition of research and development services	1,497	4,042	1,958
BMS and Pfizer total	1,497	4,042	1,958
Bayer and Janssen:			
Recognition of research and development services	3,598	3,876	–
Bayer and Janssen total	3,598	3,876	–
Lee's:			
Recognition of research and development services	243	194	–
Lee's total	243	194	–
Daiichi Sankyo:			
Recognition of research and development services	4,287	2,419	–
Daiichi Sankyo total	4,287	2,419	–
Total collaboration and license revenue	$ 9,625	$ 10,531	$ 72,042

Research and development expenses

Research and development expenses represent costs incurred to conduct research, such as the discovery and development of our unpartnered product candidates, as well as discovery and development of clinical candidates pursuant to our collaboration agreements. We recognize all research and development costs as they are incurred. Payments made prior to the receipt of goods or services to be used in research and development are capitalized until the goods are received or services are rendered.

Our research and development expenses may increase or decrease by amounts we may pay or receive under various cost-sharing provisions of our collaboration and license agreements.

We expect our research and development expenses to increase as we continue to advance our product candidates through clinical development. We intend to identify partnerships to further develop other product candidates that strengthen our pipeline, which may offset a portion of our research and development expenses through reimbursement from these partners. In addition, if any of our product candidates receive regulatory approval for commercial sale, we expect to incur significant expenses associated with the establishment of a hospital-based sales force in the United States and possibly other major markets. Because of the numerous risks and uncertainties associated with drug development, we are unable to predict the timing or amount of expenses incurred or when, or if, we will be able to achieve and sustain profitability.

The following table summarizes our research and development expenses by product candidate:

	Phase of Development	Year Ended December 31,		
		2014	2013	2012
			(in thousands)	
Product candidate				
Betrixaban	Phase 3	$ 64,252	$ 40,641	$ 27,297
Andexanet alfa	Phase 3 and 4	52,576	33,420	15,049
Cerdulatinib	Phase 1/2a	5,861	5,242	726
Syk selective inhibitor	Pre-clinical	(41)	(113)	3,344
Elinogrel[1]	Phase 3 ready	(30)	59	172
Other research and development expenses[2]		1,021	37	3,129
Total research and development expenses[3]		$ 123,639	$ 79,286	$ 49,717

(1) We are currently not developing Elinogrel but may resume development in the future.
(2) Amounts in all periods include costs for other potential product candidates.
(3) Our research and development expenses have been reduced by reimbursements of certain research and development expenses pursuant to the cost-sharing provisions of our agreements with Biogen Idec commencing in the fourth quarter of 2011 and MyoKardia, Inc. and Global Blood Therapeutics, Inc. commencing in the fourth quarter of 2012.

The program-specific expenses summarized in the table above include costs directly attributable to our product candidates. We allocate research and development salaries, benefits, stock-based compensation and indirect costs to our product candidates on a program-specific basis, and we include these costs in the program-specific expenses. The largest component of our total operating expenses has historically been our investment in research and development activities, including the clinical development of our product candidates. We expect our research and development expenses to increase in the future. The process of conducting the necessary clinical research to obtain FDA approval is costly and time consuming. We consider the active management and development of our clinical pipeline to be crucial to our long-term success. The actual probability of success for each product candidate and clinical program may be affected by a variety of factors including: the quality of the product candidate, early clinical data, investment in the program, competition, manufacturing capability and commercial viability. Furthermore, in the past we have entered into collaborations with third parties to participate in the development and commercialization of our product candidates, and we may enter into additional collaborations in the future. In situations in which third parties have control over the preclinical development or clinical study process for a product candidate, the estimated completion dates are largely under the control of such third parties and not under our control. We cannot forecast with any degree of certainty which of our product candidates, if any, will be subject to future collaborations or how such arrangements would affect our development plans or capital requirements. As a result of the uncertainties discussed above, we are unable to determine the duration and completion costs of our research and development projects or when and to what extent we will generate revenue from the commercialization and sale of any of our product candidates.

General and administrative expenses

General and administrative expenses consist primarily of personnel costs, allocated facilities costs and other expenses for outside professional services, including legal, human resources, audit and accounting services. Personnel costs consist of salaries, benefits and stock-based compensation. We are incurring additional expenses as a result of operating as a public company that is now subject to the internal control reporting requirements of the Sarbanes-Oxley Act of 2002, or SOX, as well as other costs including expenses related to compliance with the rules and regulations of the Securities and Exchange Commission, or SEC, and those of The NASDAQ Global Market, additional insurance expenses, investor relations activities and other administration and professional services.

Interest and other income, net

Interest and other income, net consists primarily of interest received on our cash, cash equivalents and investments, unrealized gains and losses from the remeasurement of our foreign currency bank balances and foreign currency forward contracts and gains and losses resulting from the remeasurement of our convertible preferred stock warrant liability. We recorded adjustments to the estimated fair value of the convertible preferred stock warrants until they were converted into warrants to purchase shares of our common stock upon the closing of our initial public offering, or IPO in May 2013. At that time, we reclassified the convertible preferred stock warrant liability to additional paid-in capital and we will no longer record any related periodic fair value adjustments.

Critical accounting policies and significant judgments and estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our financial statements, which have been prepared in accordance with United States generally accepted accounting principles, or U.S. GAAP. The preparation of these 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 financial statements, as well as the reported revenue generated and expenses incurred during the reporting periods. Our estimates are based on our 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. Actual results may differ from these estimates under different assumptions or conditions.

While our significant accounting policies are described in more detail in Note 2 of our financial statements included in this Annual Report on Form 10-K, we believe the following accounting policies to be critical to the judgments and estimates used in the preparation of our financial statements.

Variable Interest Entities

We review agreements we enter into with third party entities, pursuant to which we may have a variable interest in the entity, in order to determine if the entity is a variable interest entity, or VIE. If the entity is a VIE, we assess whether or not we are the primary beneficiary of that entity. In determining whether we are the primary beneficiary of an entity, we apply a qualitative approach that determines whether we have both (1) the power to direct the economically significant activities of the entity and (2) the obligation to absorb losses of, or the right to receive benefits from, the entity that could potentially be significant to that entity. If we determine we are the primary beneficiary of a VIE, we consolidate the statements of operations and financial condition of the VIE into our consolidated financial statements.

Our determination about whether we should consolidate such VIEs is made continuously as changes to existing relationships or future transactions may result in a consolidation or deconsolidation event.

Revenue recognition

We generate revenue from collaboration and license agreements for the development and commercialization of our products. Collaboration and license agreements may include non-refundable or partially refundable upfront license fees, partial or complete reimbursement of research and development costs, contingent consideration payments based on the achievement of defined collaboration objectives and royalties on sales of commercialized products. Our performance obligations under our collaborations include the transfer of intellectual property rights (licenses), obligations to provide research and development services and related clinical drug supply, obligation to provide regulatory approval services and obligations to participate on certain development and/or commercialization committees with the collaborators. Upfront payments are recorded as deferred revenue in our consolidated balance sheet and are recognized as collaboration revenue over our estimated period of performance that is consistent with the terms of the research and development obligations contained in each collaboration agreement. We regularly review the estimated periods of performance related to our collaborations based on the progress made under each arrangement. Our estimates of our performance period may change over the course of the collaboration term. Such a change could have a material impact on the amount of revenue we record in future periods.

Payments that are contingent upon achievement of a substantive milestone are recognized in their entirety in the period in which the milestone is achieved. A milestone is defined as an event that can only be achieved based on our performance and there is substantive uncertainty about whether the event will be achieved at the inception of the arrangement. Events that are contingent only on the passage of time or only on counterparty performance are not considered milestones subject to this guidance. Further, the amounts received must relate solely to prior performance, be reasonable relative to all of the deliverables and payment terms within the agreement and commensurate with our performance to achieve the milestone after commencement of the agreement. Payments contingent upon achievement of events that are not considered substantive milestones are allocated to the respective arrangements unit of accounting when received and recognized as revenue based on the revenue recognition policy for that unit of accounting.

Amounts from sales of licenses are recognized as revenue. Amounts received as funding of research and development or regulatory approval activities are recognized as revenue if the collaboration arrangement involves the sale of our research or development and regulatory approval services at amounts that exceed our cost. However, such funding is recognized as a reduction in research and development expense when we engage in a research and development project jointly with another entity, with both entities participating in project activities and sharing costs and potential benefits of the arrangement.

Amounts related to research and development and regulatory approval funding are recognized as the related services or activities are performed, in accordance with the contract terms. Payments may be made to or by us based on the number of full-time equivalent researchers assigned to the collaboration project and the related research and development expenses incurred.

Research and development and accrued research and development expenses

Research and development costs are expensed as incurred and consist of salaries and benefits, lab supplies, materials and facility costs, as well as fees paid to other nonemployees and entities that conduct certain research and development activities on our behalf. Amounts incurred in connection with collaboration and license agreements are also included in research and development expense. Payments made prior to the receipt of goods or services to be used in research and development are capitalized until the goods or services are received.

Clinical trial costs are a component of research and development expenses. We accrue and expense clinical trial activities performed by third parties based upon actual work completed in accordance with agreements established with clinical research organizations and clinical sites. We determine the actual costs through monitoring patient enrollment and discussions with internal personnel and external service providers as to the progress or stage of completion of trials or services and the agreed-upon fee to be paid for such services.

As part of the process of preparing financial statements, we are required to estimate and accrue expenses, the largest of which are research and development expenses. This process involves the following:

- 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;
- estimating and accruing expenses in our financial statements as of each balance sheet date based on facts and circumstances known to us at the time; and
- periodically confirming the accuracy of our estimates with selected service providers and making adjustments, if necessary.

Examples of estimated research and development expenses that we accrue include:

- fees paid to CROs in connection with preclinical and toxicology studies and clinical studies;
- fees paid to investigative sites in connection with clinical studies;
- fees paid to CMOs in connection with the production of clinical study materials; and
- professional service fees for consulting and related services.

We base our expense accruals related to clinical studies on our estimates of the services received and efforts expended pursuant to contracts with multiple research institutions and clinical research organizations that conduct and manage clinical studies on our behalf. The financial terms of these agreements vary from contract to contract and may result in uneven payment flows. Payments under some of these contracts depend on factors, such as the successful enrollment of patients and the completion of clinical study milestones. Our service providers invoice us monthly in arrears for services performed. 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 we do not identify costs that we have begun to incur or if we underestimate or overestimate the level of services performed or the costs of these services, our actual expenses could differ from our estimates.

To date, we have not experienced significant changes in our estimates of accrued research and development expenses after a reporting period. However, due to the nature of estimates, we cannot assure you that we will not make changes to our estimates in the future as we become aware of additional information about the status or conduct of our clinical studies and other research activities.

Clinical Trial Accruals

Clinical trial costs are a component of research and development expenses. We accrue and expense clinical trial activities performed by third parties based upon actual work completed in accordance with agreements established with clinical research organizations and clinical sites. We determine the actual costs through monitoring patient enrollment and discussions with internal personnel and external service providers as to the progress or stage of completion of trials or services and the agreed-upon fee to be paid for such services.

Stock-based compensation

We recognize compensation costs related to stock options granted to employees based on the estimated fair value of the awards on the date of grant, net of estimated forfeitures. We estimate the grant date fair value, and the resulting stock-based compensation expense, using the Black-Scholes option-pricing model. The grant date fair value of the stock-based awards is generally recognized on a straight-line basis over the requisite service period, which is generally the vesting period of the respective awards.

The Black-Scholes option-pricing model requires the use of highly subjective and complex assumptions which determine the fair value of stock-based awards, including the expected term and the price volatility of the underlying stock. The expected term of employee options granted is determined using the simplified method (based on the midpoint between the vesting date and the end of the contractual term). As sufficient trading history does not yet exist for our common stock, therefore our estimate of expected volatility is based on the volatility of other companies with similar products under development, market, size and other factors.

Prior to our IPO in May 2013, stock based compensation cost was measured at the date of grant, based on the estimated fair value of the award as determined by our board of directors and recognized as expense on a straight-line basis over the requisite service period. Our board of directors, with the assistance of management and, in some cases, an independent third-party valuation consultant, determined the estimated fair value of our common stock. In determining the estimated fair value of our common stock, our board of directors used a combination of the market multiple approach and the IPO value approach to estimate the enterprise value of our company in accordance with the American Institute of Certified Public Accountants Accounting and Valuation Guide: *Valuation of Privately-Held-Company Equity Securities Issued as Compensation.* The per share common stock value was estimated by allocating the enterprise value using the probability-weighted expected return method at each valuation date prior to December 2011 and commencing in December 2012. The per share common stock value was estimated by using the option pricing method at each valuation date between December 2011 and December 2012. For the options granted subsequent to our IPO, the exercise price of stock options is equal to the closing market price of the underlying common stock on the grant date.

We account for stock-based compensation arrangements with non-employees using a fair value approach. The fair value of these options is measured using the Black-Scholes option pricing model reflecting the same assumptions as applied to employee options in each of the reported periods, other than the expected life, which is assumed to be the remaining contractual life of the option. The compensation costs of these arrangements are subject to remeasurement over the vesting terms as earned.

We expect to continue to grant stock options in the future, and to the extent that we do, our actual stock-based compensation expense recognized in future periods will likely increase.

Income taxes

We file U.S. federal income tax returns and California, Alaska and Massachusetts state tax returns. To date, we have not been audited by the Internal Revenue Service or any state income tax authority.

We provide for income taxes under the asset and liability method. Current income tax expense or benefit represents the amount of income taxes expected to be payable or refundable for the current year. Deferred income tax assets and liabilities are determined based on differences between the financial statement reporting and tax bases of assets and liabilities and net operating loss and credit carryforwards, and are measured using the enacted tax rates and laws that will be in effect when such items are expected to reverse. Deferred income tax assets are reduced, as necessary, by a valuation allowance when management determines it is more likely than not that some or all of the tax benefits will not be realized. The recognition, derecognition and measurement of a tax position is based on management's best judgment given the facts, circumstances and information available at the reporting date. Our policy is to recognize interest and penalties related to the underpayment of income taxes as a component of income tax expense or benefit. To date, there have been no interest or penalties charged in relation to the underpayment of income taxes.

As of December 31, 2014, our total deferred tax assets were $183.6 million. The deferred tax assets were primarily comprised of federal and state tax net operating losses and tax credit carryforwards. Utilization of the net operating loss and tax credit carryforwards may be subject to an annual limitation due to historical or future ownership percentage change rules provided by the Internal Revenue Code of 1986, and similar state provisions. The annual limitation may result in the expiration of certain net operating loss and tax credit carryforwards before their utilization. In 2013, we performed an analysis on annual limitation as a result of ownership changes that may have occurred through November 2013. Our analysis indicates that a change occurred during 2013. As a result of this change, our net operating loss and tax credit carryforwards will not be subject to limitation in total, but we may be subject to a limitation as it relates to the timing of utilization. However, due to a lack of historical earnings and uncertainties surrounding our ability to generate future taxable income to realize these tax assets, a full valuation allowance has been established to offset our deferred tax assets.

Comparison of the years ended December 31, 2014 and 2013

Revenue

	Year Ended December 31,		Increase /	% Increase /
	2014	2013	(Decrease)	(Decrease)
	(in thousands, except percentages)			
Collaboration and license revenue	$ 9,625	$ 10,531	$ (906)	(9%)

The decrease in collaboration and license revenue during 2014 was primarily due to the decrease in revenue following the completion of our Phase 2 agreement with BMS and Pfizer. We recognized $1.5 million from our Phase 2 agreement with BMS and Pfizer during 2014, compared to revenue of $4.0 million recognized from the same agreement with BMS and Pfizer during 2013. This decrease in collaboration and license revenue was partially offset by an increase in revenue recognized during 2014 from our agreements with Daiichi Sankyo of $4.3 million compared to revenue recognized during 2013 of $2.4 million due to revenue recognized from the second collaboration agreement entered into with Daiichi Sankyo in the third quarter of 2014.

We expect revenue recognized in future periods to fluctuate as we recognize revenue related to our existing collaboration agreements and enter into new collaboration agreements.

Research and development expenses

	Year Ended December 31,		Increase /	% Increase /
	2014	2013	(Decrease)	(Decrease)
	(in thousands, except percentages)			
Research and development expenses	$ 123,639	$ 79,286	$ 44,353	56%

The increase in research and development expenses was primarily due to the following:

- increased program costs of $23.6 million to advance Betrixaban;
- increased program costs of $19.2 million to advance Andexanet alfa;
- increased program costs of $0.6 million to advance Cerdulatinib; and
- increased development costs of $1.0 million to support early research programs that are not related to or in support of our primary programs of development.

We expect our research and development expenses to increase in the future as we advance our product candidates through clinical development. The timing and amount of expenses incurred will depend largely upon the outcomes of current or future clinical studies for our product candidates as well as the related regulatory requirements, manufacturing costs and any costs associated with the advancement of our preclinical programs.

General and administrative expenses

	Year Ended December 31,		Increase /	% Increase /
	2014	2013	(Decrease)	(Decrease)
	(in thousands, except percentages)			
General and administrative expenses	$ 23,552	$ 15,423	$ 8,129	53%

The increase in general and administrative expenses during 2014 was primarily related to increased headcount related costs including an increase in stock based compensation expense of $3.3 million, and increased costs associated with being a public company including directors and officer's insurance and director fees of $0.4 million, and higher professional and legal fees to support business development, collaboration arrangements and pre-commercial activities of $4.3 million.

We expect general and administrative expenses to continue to increase in order to support the costs of related to our compliance with internal controls over financial reporting under the Sarbanes-Oxley Act of 2002, or SOX, and our growing business.

Interest and other income, net

	Year Ended December 31,		Increase /	% Increase /
	2014	2013	(Decrease)	(Decrease)
	(in thousands, except percentages)			
Interest and other income, net	$ 441	$ 826	$ (385)	(47%)

Interest and other income, net decreased as a result of unfavorable fluctuations in the Euro compared to the U.S. dollar and the losses related to our Euro forward contracts and foreign currency exchange gains of $0.7 million, partially offset by increased interest income of $0.4 million earned on higher cash, cash equivalents and investments balances .

Comparison of the years ended December 31, 2013 and 2012

Revenue

	Year Ended December 31,		Increase /	% Increase /
	2013	2012	(Decrease)	(Decrease)
	(in thousands, except percentages)			
Collaboration and license revenue	$ 10,531	$ 72,042	$ (61,511)	(85%)

The decrease in collaboration and license revenue during 2013 was due to the decrease in revenue from Novartis following the termination of our agreement with Novartis effective July 1, 2012. We recognized no revenue from our agreement with Novartis during 2013, compared to revenue of $70.1 million recognized from our agreement with Novartis during 2012. This decrease in collaboration and license revenue was partially offset by revenue recognized during 2013 with respect to our agreements with BMS and Pfizer of $4.0 million, Bayer and Janssen of $3.9 million, Lee's of $0.2 million and Daiichi Sankyo of $2.4 million.

Research and development expenses

	Year Ended December 31,		Increase /	% Increase /
	2013	2012	(Decrease)	(Decrease)
	(in thousands, except percentages)			
Research and development expenses	$ 79,286	$ 49,717	$ 29,569	59%

The increase in research and development expenses was primarily due to the following:

- increased program costs of $13.3 million to advance Betrixaban;
- increased program costs of $18.4 million to advance Andexanet alfa; and
- increased program costs of $4.5 million to advance Cerdulatinib.

These increases were partially offset by:

- decreased net program costs of $3.5 million related to PRT2607, primarily due to reimbursements received from Biogen Idec to fund clinical and manufacturing costs pursuant to the cost-sharing provisions of our agreement with Biogen Idec; and
- decreased development costs of $3.2 million as we reduced costs for programs that are not related to or in support of our primary programs of development; Betrixaban, Andexanet alfa and Cerdulatinib.

General and administrative expenses

	Year Ended December 31,		Increase /	% Increase /
	2013	2012	(Decrease)	(Decrease)
	(in thousands, except percentages)			
General and administrative expenses	$ 15,423	$ 11,469	$ 3,954	34%

The increase in general and administrative expenses during 2013 was primarily related to increased headcount related costs including an increase in stock based compensation expense of $3.3 million, and increased costs associated with being a public company including directors and officer's insurance and director fees of $0.5 million, and higher professional and legal fees to support business development and collaboration arrangements of $0.1 million.

Interest and other income, net

	Year Ended December 31,		Increase /	% Increase /
	2013	2012	(Decrease)	(Decrease)
	(in thousands, except percentages)			
Interest and other income (expense), net	$ 826	$ 510	$ 316	62%

Interest and other income, net increased as a result of interest income of $0.1 million earned on higher cash, cash equivalents and investments balances and foreign currency exchange gains of $0.3 million primarily related to favorable fluctuations in the Euro compared to the U.S. dollar and the unrealized gains related to our Euro forward contracts. The increase was partially offset by decreased other income of $0.1 million due to the fair value remeasurement of our convertible preferred stock warrants.

Liquidity and capital resources

Due to our substantial research and development expenditures, we have generated significant operating losses since our inception. We have funded our operations primarily through sales of our common stock as part of our IPO and follow-on public offering, and our convertible preferred stock and amounts received from our collaboration partners. Our expenditures are primarily related to research and development activities. At December 31, 2014, we had available cash, cash equivalents and investments of $392.3 million. Our cash, cash equivalents and investments are held in a variety of interest-bearing instruments, including investments backed by U.S. government agencies, corporate debt securities and money market accounts. Cash in excess of immediate requirements is invested with a view toward liquidity and capital preservation, and we seek to minimize the potential effects of concentration and degrees of risk.

On October 8, 2014, we closed an underwritten public offering of 6,200,000 shares of our common stock, at a public offering price of $26.00 per share. In addition, on October 8, 2014, the underwriters of the offering exercised their over-allotment option to purchase an additional 930,000 shares from us at the public offering price. The offer and sale of all of the shares in the offering were registered under the Securities Act pursuant to an automatically effective registration statement on Form S-3 ASR (File No. 333-199094). The net proceeds from the offering to us including the over-allotment option, net of underwriting discounts and commissions and offering costs of approximately $10.7 million, were approximately $174.6 million.

The following table summarizes our cash flows for the periods indicated:

	Year Ended December 31,		
	2014	2013	2012
		(in thousands)	
Cash used in operating activities	$ (100,706)	$ (63,615)	$ (49,225)
Cash used in investing activities	$ (139,152)	$ (120,736)	$ (67,802)
Cash provided by financing activities	$ 179,599	$ 248,511	$ 317
Net increase (decrease) in cash	$ (60,259)	$ 64,160	$ (116,710)

Cash used in operating activities

Cash used in operating activities was $100.9 million for the year ended December 31, 2014 reflecting a net loss of $137.1 million, which was decreased by non-cash charges of $9.3 million for stock-based compensation, $3.7 million for amortization of premium on investments and $1.5 million for depreciation and amortization. Cash used in operating activities also reflected an increase in net operating assets of $21.7 million primarily due to increases in accounts payable and accrued and other liabilities of $6.7 million related to higher clinical study and related costs as we continue to increase our research and development activities, an increase in deferred revenue of $31.4 million due to an increase in deferred revenue of $13.0 million related to the upfront payments received from Bayer and Janssen, $15.0 million related to the upfront payments received from Daiichi Sankyo and $13.0 million related to the upfront payments received from BMS and Pfizer in the year ended December 31, 2014, partially offset by the recognition of collaboration revenue earned of $9.6 million from our collaboration agreements and an increase in accrued compensation and employee benefits of $1.1 million related to our increased headcount. Cash used in operating activities also reflected an increase in prepaid expenses and other current assets of $2.1 million and an increase of prepaid and other long-term assets of $15.6 million related to our upfront payment to CMC Biologics of $14.6 million pursuant to our commercial supply agreements with CMC Biologics. Also reflected in cash used in operating activities is a decrease in receivables from collaborations of $0.3 million due to the receipt of research and development expenses reimbursable from Biogen Idec pursuant to our agreement with Biogen Idec.

Cash used in operating activities was $63.6 million for the year ended December 31, 2013 reflecting a net loss of $83.4 million, which was decreased by non-cash charges of $5.0 million for stock-based compensation, $2.3 million for amortization of premium on investments and $1.4 million for depreciation and amortization. Cash used in operating activities also reflected an increase in net operating assets of $11.1 million primarily due to increases in accounts payable and accrued and other liabilities of $10.1 million related to higher clinical study and related costs as we continue to increase our research and development activities, an increase in deferred revenue of $1.2 million due to an increase in deferred revenue of $5.0 million related to the upfront payments received from Bayer and Janssen, $6.0 million related to the upfront payments received from Daiichi Sankyo and $0.7 million related to the upfront payments received from Lee's in the year ended December 31, 2013, partially offset by the recognition of collaboration revenue earned of $10.5 million from our collaboration agreements and an increase in accrued compensation and employee benefits of $0.7 million to support our increased headcount. Cash used in operating activities also reflected an increase in prepaid expenses and other current assets of $0.7 million primarily reflecting higher interest receivable on our investment portfolio of $0.4 million, unrealized gains on our foreign currency forward contracts of $0.4 million, other receivables of $0.4 million related to our agreements with Myokardia and Global Blood Therapeutics, prepaid premiums for corporate director's and officer's insurance of $0.1 million following the renewal of our corporate insurance program and placement of our public company policies, and prepaid rent of $0.2 million in 2013 partially offset by recognition of clinical trial upfront fees upon contract execution of $0.7 million. Also reflected in cash used in operating activities is a decrease in other assets following payment and classification of deferred offering costs of $1.6 million and a decrease in receivables from collaborations of $0.4 million due to the receipt of research and development expenses reimbursable from Biogen Idec pursuant to our agreement with Biogen Idec.

Cash used in operating activities was $49.2 million for the year ended December 31, 2012 reflecting net income of $11.4 million, which was increased by non-cash charges of $1.4 million for depreciation and amortization, $1.5 million for amortization of premium on investments, $2.8 million for stock-based compensation and $0.1 million for unrealized gains related to foreign currency forward contracts. Cash used in operating activities also reflected a decrease in net operating assets of $66.1 million primarily due to the recognition of all remaining deferred revenue of $65.1 million related to the upfront payments received from Novartis in prior periods following the termination of our agreement with Novartis effective July 1, 2012 and the recognition of collaboration revenue earned of $6.9 million; an increase in prepaid expenses and other current assets of $2.5 million primarily for clinical study costs paid in advance to our CRO and prepaid clinical study insurance; and an increase in other assets of $2.1 million related to deferred offering costs and legal fees related to our IPO. Also reflected in cash used in operating activities is a decrease in accrued compensation and employee benefits of $1.0 million due to 2011 bonuses that were paid in the first quarter of 2012 and a decrease in receivables from collaboration agreements of $0.3 million due to increased research and development expenses reimbursable from Biogen Idec pursuant to our agreements with Biogen Idec, MyoKardia, Inc. and Global Blood Therapeutics, Inc., and increases in accounts payable and accrued and other liabilities of $5.4 million related to higher clinical study and related costs as we continue to increase our research and development activities.

Cash used in investing activities

Cash used in investing activities of $139.2 million for the year ended December 31, 2014 was primarily related to purchases of investments of $332.2 million and capital equipment purchases of $1.6 million, partially offset by proceeds from sales of investments of $2.6 million and proceeds from maturities of investments of $192.0 million.

Cash used in investing activities of $120.7 million for the year ended December 31, 2013 was primarily related to purchases of investments of $219.8 million and capital equipment purchases of $0.9 million, partially offset by proceeds from sales of investments of $8.0 million and proceeds from maturities of investments of $92.0 million.

Cash used in investing activities of $67.8 million for the year ended December 31, 2012 was primarily related to purchases of investments of $144.6 million and capital equipment purchases of $0.4 million, partially offset by proceeds from sales of investments of $36.5 million and proceeds from maturities of investments of $40.7 million.

Cash provided by financing activities

Cash provided by financing activities of $179.6 million for the year ended December 31, 2014, was primarily related to proceeds from our public offering, net of underwriting discounts and commissions, of $175.2 million, partially offset by payments of offering costs of $0.6 million, and proceeds from the exercise of stock options of $5.0 million.

Cash provided by financing activities of $248.5 million for the year ended December 31, 2013, was primarily related to proceeds from our IPO, net of underwriting discounts and commissions, of $131.0 million, partially offset by payments of deferred offering costs of $5.0 million and proceeds from our follow-on public offering, net of underwriting discounts and commissions, of $120.8 million, partially offset by payments of deferred offering costs of $0.9 million, and proceeds from the exercise of stock options of $2.5 million.

Cash provided by financing activities of $0.3 million for the year ended December 31, 2012, was related to proceeds from the exercise of stock options.

We believe that our existing capital resources, together with interest thereon, will be sufficient to meet our projected operating requirements for at least the next 12 months. We have based this estimate on assumptions that may prove to be wrong, and we could utilize our available capital resources sooner than we currently expect. Further, our operating plan may change, and we may need additional funds to meet operational needs and capital requirements for product development and commercialization sooner than planned. We currently have no credit facility or committed sources of capital other than potential milestones receivable under our current collaboration. Because of the numerous risks and uncertainties associated with the development and commercialization of our product candidates and the extent to which we may enter into additional collaborations with third parties to participate in their development and commercialization, we are unable to estimate the amounts of increased capital outlays and operating expenditures associated with our current and anticipated clinical studies. Our future funding requirements will depend on many factors, including the following:

- the scope, rate of progress, results and cost of our clinical studies, preclinical testing and other related activities;
- the cost of manufacturing clinical supplies, and establishing commercial supplies, of our product candidates and any products that we may develop, including process improvements in order to manufacture Andexanet alfa at commercial scale;
- the receipt of any collaboration payments;
- the number and characteristics of product candidates that we pursue;
- the cost, timing and outcomes of regulatory approvals;
- the cost and timing of establishing sales, marketing and distribution capabilities;
- the terms and timing of any other collaborative, licensing and other arrangements that we may establish;
- the timing, receipt and amount of sales, profit sharing or royalties, if any, from our potential products;
- the cost of preparing, filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights; and
- the extent to which we acquire or invest in businesses, products or technologies, although we currently have no commitments or agreements relating to any of these types of transactions.

If we need to raise additional capital to fund our operations, funding may not be available to us on acceptable terms, or at all. If we are unable to obtain adequate financing when needed, we may have to delay, reduce the scope of or suspend one or more of our clinical studies, research and development programs or commercialization efforts. We may seek to raise any necessary additional capital through a combination of public or private equity offerings, debt financings, collaborations, strategic alliances, licensing arrangements and other marketing and distribution arrangements. To the extent that we raise additional capital through marketing and distribution arrangements or other collaborations, strategic alliances or licensing arrangements with third parties, we may have to relinquish valuable rights to our product candidates, future revenue streams, research programs or product candidates or to grant licenses on terms that may not be favorable to us. If we do raise additional capital through public or private equity offerings, the ownership interest of our existing stockholders will be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect our stockholders' rights. If we raise additional capital through debt financing, we may be subject to covenants limiting or restricting our ability to take specific actions, such as incurring additional debt, making capital expenditures or declaring dividends.

Off-balance sheet arrangements and contractual obligations

On July 1, 2014, we entered into a commercial supply agreement with CMC Biologics, pursuant to which CMC Biologics will manufacture clinical and commercial supply of Andexanet alfa and perform pre-validation and validation work on our behalf. Total fixed commitments under the agreement for the purchases of clinical and commercial batches, not taking into account possible price and batch adjustments, are $293.9 million over the life of the agreement from 2015 through 2021.

Under the consolidation accounting guidance, we determined that CMC Biologics is a VIE but that Portola is not CMC Biologics' primary beneficiary and therefore consolidation of CMC Biologics by us is not required. We based this determination on, among other factors, the upfront and reservation payment being akin to a form of subordinated financing, the fixed pricing terms of the arrangement creating variability that is absorbed by the Company, and that we do not have the power to direct the activities that most significantly affect the economic performance of CMC Biologics.

As of December 31, 2014, we have not provided financial, or other, support to CMC Biologics that was not previously contractually required. Other than the reservation payment we are not required to make any additional payments to CMC Biologics. The upfront fee of $10.0 million recorded in prepaid and other long-term assets in the consolidated balance sheet represents our maximum exposure to loss under this agreement at December 31, 2014. The upfront payment will be charged to research and development expense, or cost of sales upon regulatory approval of Andexanet alfa, as batches are delivered over the term of the agreement. We are currently not able to quantify the exposure to losses associated with the fixed pricing terms of this agreement.

We may terminate the agreement unilaterally if we discontinue the development and commercialization of Andexanet alfa for regulatory, safety, efficacy or other commercial reasons, or if the projected market demand or gross margin of Andexanet alfa is below a minimum threshold, in which case we will be obligated to pay CMC Biologics a termination payment ranging from between $5.0 million and $30.0 million, depending on the time of termination.

The following table summarizes our future contractual obligations, including fixed commitments for the purchase of clinical and commercial batches under the CMC Biologics commercial supply agreement, as of December 31, 2014:

	Payments due by period				
	Less than 1 year	1 to 3 years	3 to 5 years	More than 5 years	Total
			(in thousands)		
Contractual Obligations:					
Batch Purchase Commitments	$ 15,178	$ 154,960	$ 88,660	$ 32,500	$ 291,298
Purchase commitments	12,545	2,583	–	–	15,128
Operating lease obligations	1,769	4,204	4,467	571	11,011
Total Contractual obligations	$ 29,491	$ 161,747	$ 93,127	$ 33,071	$ 317,436

Pursuant to our asset purchase agreement with Millennium Pharmaceuticals, Inc., or Millennium, we are obligated to pay to Millennium royalties on sales of certain products if product sales are ever achieved, which royalty payments will continue until the expiration of the relevant patents or 10 years after the launch, whichever is later. Pursuant to the license agreement between Millennium and us, we are required to make certain license fee, milestone, royalty and sublicense sharing payments to Millennium as we develop, commercialize or sublicense Betrixaban and other products from certain Factor Xa programs as described in the agreement. The Millennium license agreement further provides for additional payments to Millennium of up to $35.0 million based on the achievement of certain milestones related to Betrixaban and the Factor Xa programs. See the section of this report entitled "Business—Collaboration and license agreements—Millennium agreements" for a more detailed description of these agreements.

We have also entered into an agreement pursuant to which a contract manufacturer, Lonza Group Ltd., will fully develop a commercial scale manufacturing process for Andexanet alfa and produce approval-enabling validation lots. The agreement includes purchase commitments aggregating approximately $42.1 million over several years of which $15.1 million is non-cancellable and included in the contractual obligations table above as a purchase commitment.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The primary objective of our investment activities is to preserve our capital to fund our operations. We also seek to maximize income from our investments without assuming significant risk. To achieve our objectives, we maintain a portfolio of cash equivalents and investments in a variety of securities of high credit quality. As of December 31, 2014, we had cash, cash equivalents and investments of $392.3 million consisting of cash and liquid investments deposited in highly rated financial institutions in the United States. A portion of our investments may be subject to interest rate risk and could fall in value if market interest rates increase. However, because our investments are primarily short-term in duration, we believe that our exposure to interest rate risk is not significant and a 1% movement in market interest rates would not have a significant impact on the total value of our portfolio. We actively monitor changes in interest rates.

We contract for the conduct of certain clinical development and manufacturing activities with vendors in Europe. Beginning in 2012, we have utilized foreign currency forward contracts to mitigate our exposure to foreign currency gains and losses. The balance of forward contracts was zero at December 31, 2014. We made payments in the aggregate amount of €25.6 million to our European vendors during the year ended December 31, 2014. We are subject to exposure due to fluctuations in foreign exchange rates in connection with our cash balance denominated in Euros. We may continue to hedge our foreign currency exposures but we have not and do not plan to use derivative financial instruments for speculation or trading purposes.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The Consolidated Financial Statements and related disclosures included in Part IV, Item 15 of this annual report are incorporated by reference into this Item 8.

PORTOLA PHARMACEUTICALS, INC.

INDEX TO FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders of Portola Pharmaceuticals, Inc.

We have audited the accompanying consolidated balance sheets of Portola Pharmaceuticals, Inc. (the "Company") as of December 31, 2014 and 2013, and the related consolidated statements of operations, comprehensive income (loss), convertible preferred stock and stockholders' equity (deficit), and cash flows for each of the three years in the period ended December 31, 2014. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these 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 financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes 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, the consolidated financial statements referred to above present fairly, in all material respects, the consolidated financial position of Portola Pharmaceuticals, Inc. at December 31, 2014 and 2013, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2014, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Portola Pharmaceuticals, Inc.'s internal control over financial reporting as of December 31, 2014, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated March 2, 2015 expressed an unqualified opinion hereon.

/s/ Ernst & Young LLP
Redwood City, California
March 2, 2015

PORTOLA PHARMACEUTICALS, INC.

Consolidated Balance Sheets

(In thousands, except share and per share data)

	December 31, 2014	December 31, 2013
Assets		
Current assets:		
Cash and cash equivalents	$ 57,514	$ 117,773
Short-term investments	251,759	150,892
Receivables from collaborations	57	309
Prepaid expenses and other current assets	5,747	3,733
Total current assets	315,077	272,707
Property and equipment, net	2,776	2,600
Long-term investments	83,030	50,371
Prepaid and other long-term assets	15,612	53
Total assets	$ 416,495	$ 325,731
Liabilities and stockholders' equity		
Current liabilities:		
Accounts payable	$ 14,084	$ 3,232
Accrued compensation and employee benefits	3,512	2,569
Accrued and other liabilities	13,966	17,796
Deferred revenue, current portion	9,569	1,958
Total current liabilities	41,131	25,555
Deferred revenue, long-term	27,016	3,253
Other long-term liabilities	546	588
Total liabilities	68,693	29,396
Stockholders' equity:		
Preferred stock, $0.001 par value, 5,000,000 shares authorized at December 31, 2014 and 2013; no shares issued and outstanding at December 31, 2014 and 2013;	–	–
Common stock, $0.001 par value, 100,000,000 shares authorized at December 31, 2014 and 2013; 48,766,806 shares and 40,915,130 shares issued and outstanding at December 31, 2014 and 2013, respectively	49	41
Additional paid-in capital	770,789	581,911
Accumulated deficit	(422,797)	(285,672)
Accumulated other comprehensive (loss) income	(239)	55
Total stockholders' equity	347,802	296,335
Total liabilities and stockholders' equity	$ 416,495	$ 325,731

See accompanying notes

PORTOLA PHARMACEUTICALS, INC.

Consolidated Statements of Operations

(In thousands, except share and per share data)

	Year Ended December 31,		
	2014	**2013**	**2012**
Collaboration and license revenue	$ 9,625	$ 10,531	$ 72,042
Operating expenses:			
Research and development	123,639	79,286	49,717
General and administrative	23,552	15,423	11,469
Total operating expenses	147,191	94,709	61,186
(Loss) income from operations	(137,566)	(84,178)	10,856
Interest and other income, net	441	826	510
Net (loss) income	$ (137,125)	$ (83,352)	$ 11,366
Net (loss) income attributable to common stockholders:			
Basic	$ (137,125)	$ (83,352)	$ –
Diluted	$ (137,125)	$ (83,352)	$ –
Net (loss) income per share attributable to common stockholders:			
Basic	$ (3.19)	$ (3.65)	$ –
Diluted	$ (3.19)	$ (3.65)	$ –
Shares used to compute net (loss) income per share attributable to common stockholders:			
Basic	42,977,463	22,842,443	1,350,939
Diluted	42,977,463	22,842,443	2,048,867

See accompanying notes

PORTOLA PHARMACEUTICALS, INC.

Consolidated Statements of Comprehensive Income (Loss)
(In thousands)

	Year Ended December 31,		
	2014	**2013**	**2012**
Net (loss) income	$ (137,125)	$ (83,352)	$ 11,366
Other comprehensive income (loss):			
Unrealized gain (loss) on available-for-sale securities, net of tax	(294)	22	34
Total comprehensive income (loss)	$ (137,419)	$ (83,330)	$ 11,400

See accompanying notes

PORTOLA PHARMACEUTICALS, INC.

Consolidated Statements of Convertible Preferred Stock and Stockholders' Equity (Deficit)
(In thousands, except share and per share data)

	Convertible Preferred Stock		Common Stock		Additional Paid-In	Accumulated	Accumulated Other Comprehensive	Total Stockholders'
	Shares	Amount	Shares	Amount	Capital	Deficit	Income (Loss)	Equity (Deficit)
Balance at December 31, 2011	24,026,797	317,280	1,279,732	1	7,581	(213,686)	(1)	(206,105)
Exercise of employee stock options for cash	–	–	104,417	–	317	–	–	317
Lapse of repurchase rights related to common shares issued pursuant to early exercises	–	–	1,359	–	10	–	–	10
Employee stock-based compensation expense	–	–	–	–	2,665	–	–	2,665
Compensation expense relating to stock options granted to consultants	–	–	–	–	144	–	–	144
Unrealized gain on available-for-sale securities, net of tax	–	–	–	–	–	–	34	34
Net income	–	–	–	–	–	11,366	–	11,366
Balance at December 31, 2012	24,026,797	317,280	1,385,508	1	10,717	(202,320)	33	(191,569)
Exercise of employee stock options for cash	–	–	403,468	–	2,529	–	–	2,529
Lapse of repurchase rights related to common shares issued pursuant to early exercises	–	–	500	–	4	–	–	4
Conversion of preferred stock warrants to common stock warrants	–	–	–	–	659	–		659
Conversion of preferred stock to common stock	(24,026,797)	(317,280)	24,026,797	24	317,256	–	–	317,280
Issuance of common stock in connection with initial public offering, net of underwriting discounts, commissions and issuance costs	–	–	9,686,171	11	125,861	–	–	125,872
Issuance of common stock in connection with follow-on offering, net of underwriting discounts, commissions and issuance costs	–	–	5,412,686	5	119,970	–	–	119,975
Employee stock-based compensation expense	–	–	–	–	4,140	–	–	4,140
Compensation expense relating to stock options granted to consultants	–	–	–	–	775	–	–	775
Unrealized gain on available-for-sale securities, net of tax	–	–	–	–	–	–	22	22
Net loss	–	–	–	–	–	(83,352)	–	(83,352)
Balance at December 31, 2013	–	–	40,915,130	41	581,911	(285,672)	55	296,335
Exercise of employee stock options for cash	–	–	652,125	1	4,398	–	–	4,399
Lapse of repurchase rights related to common shares issued pursuant to early exercises	–	–	500	–	4	–	–	4
Issuance of common stock upon cashless exercise of common stock warrants	–	–	40,314	–	–	–	–	–
Issuance of common stock pursuant to ESPP purchase			28,737	–	579			579
Issuance of common stock in connection with public offering, net of underwriting discounts, commissions and issuance costs	–	–	7,130,000	7	174,614	–	–	174,621
Employee stock-based compensation expense	–	–	–	–	8,514	–	–	8,514
Compensation expense relating to stock options granted to consultants	–	–	–	–	769	–	–	769
Unrealized loss on available-for-sale securities, net of tax	–	–	–	–	–	–	(294)	(294)
Net loss	–	–	–	–	–	(137,125)	–	(137,125)
Balance at December 31, 2014	–	$ -	48,766,806	$ 49	$ 770,789	$ (422,797)	$ (239)	$ 347,802

See accompanying notes

PORTOLA PHARMACEUTICALS, INC.

Consolidated Statements of Cash Flows
(In thousands)

	Year Ended December 31,		
	2014	2013	2012
Operating activities			
Net income (loss)	$ (137,125)	$ (83,352)	$ 11,366
Adjustments to reconcile net income (loss) to cash used in operating activities:			
Depreciation and amortization	1,542	1,359	1,389
Amortization of premium on investment securities	3,703	2,333	1,469
Stock-based compensation expense	9,333	4,974	2,809
Revaluation of convertible preferred stock warrant liability	–	(24)	(83)
Unrealized (gain) loss on foreign currency forward contracts	114	(261)	(51)
Changes in operating assets and liabilities:			
Receivables from collaborations	252	353	293
Prepaid expenses and other current assets	(2,128)	(469)	(2,481)
Prepaid and other long-term assets	(15,559)	396	(2,091)
Accounts payable	10,763	(1,773)	2,017
Accrued compensation and employee benefits	893	650	(980)
Accrued and other liabilities	(3,826)	11,908	3,375
Deferred revenue	31,374	1,169	(65,426)
Other long-term liabilities	(42)	(878)	(831)
Net cash used in operating activities	(100,706)	(63,615)	(49,225)
Investing activities			
Purchases of property and equipment	(1,629)	(933)	(362)
Purchases of investments	(332,171)	(219,813)	(144,644)
Proceeds from sales of investments	2,603	8,009	36,517
Proceeds from maturities of investments	192,045	92,001	40,687
Net cash used in investing activities	(139,152)	(120,736)	(67,802)
Financing activities			
Proceeds from public offering of common stock, net of underwriters discount	175,185	251,865	–
Payment of public offering costs	(564)	(5,883)	–
Proceeds from issuance of common stock, including early exercise of stock options	4,978	2,529	317
Net cash provided by financing activities	179,599	248,511	317
Net increase (decrease) in cash and cash equivalents	(60,259)	64,160	(116,710)
Cash and cash equivalents at beginning of year	117,773	53,613	170,323
Cash and cash equivalents at end of year	57,514	117,773	53,613
Supplemental disclosure of cash flow information			
Income taxes paid	$ –	$ –	$ 57
Noncash investing and financing activities:			
Net change in accrued compensation and employee benefits related to ESPP	$ (51)	$ –	$ –
Net change in accounts payable related to purchase of property and equipment	$ 89	$ 165	$ –

See accompanying notes

PORTOLA PHARMACEUTICALS, INC.

Notes to Consolidated Financial Statements

1. Organization

Portola Pharmaceuticals, Inc. (the "Company" or "we" or "our" or "us") is a biopharmaceutical company focused on the development and commercialization of novel therapeutics in the areas of thrombosis, other hematologic disorders and inflammation for patients who currently have limited or no approved treatment options. We were incorporated in September 2003 in Delaware. Our headquarters and operations are located in South San Francisco, California and we operate in one segment.

Our two lead programs address the area of thrombosis, or blood clots. Our lead compound Betrixaban is a novel oral once-daily inhibitor of Factor Xa in Phase 3 development for extended duration prophylaxis, or preventive treatment, of a form of thrombosis known as venous thromboembolism, in acute medically ill patients. Our second lead development candidate Andexanet alfa, formerly PRT4445, is a recombinant protein designed to reverse the anticoagulant activity in patients treated with a Factor Xa inhibitor who suffer an uncontrolled bleeding episode or undergo emergency surgery. Our third product candidate, Cerdulatinib, formerly PRT2070, is an orally available kinase inhibitor being developed for hematologic, or blood, cancers and inflammatory disorders. Our fourth program, PRT2607 and other selective Syk inhibitors is being developed in partnership with Biogen Idec Inc.

Initial Public and Other Offerings

In May 2013, we closed our initial public offering ("IPO") of 9,686,171 shares of our common stock, which included 1,263,413 shares of common stock issued pursuant to the over-allotment option granted to our underwriters. The public offering price of the shares sold in the offering was $14.50 per share. The total proceeds from the offering to us, net of underwriting discounts and commissions of approximately $9.4 million, were approximately $131.0 million. After deducting offering expenses payable by us of approximately $5.2 million, net proceeds to us were $125.8 million. Upon the closing of the IPO, all shares of convertible preferred stock then outstanding converted into 24,026,797 shares of common stock. In addition, all of our convertible preferred stock warrants were converted into warrants to purchase common stock.

In October 2013, we completed a follow-on offering of 6,366,513 shares of our common stock, which included 1,908,803 shares of common stock sold by certain existing stockholders, at a public offering price of $23.75 per share. In November 2013, the underwriters exercised their over-allotment option to purchase an additional 954,976 shares from us at the public offering price. The total proceeds from the offering and over-allotment option, net of underwriting discounts and commissions of approximately $7.7 million, were approximately $120.8 million. After deducting offering expenses of approximately $862,000, net proceeds to us were $119.9 million.

In October 2014, we completed an underwritten public offering of 6,200,000 shares of our common stock at a public offering price of $26.00 per share. In addition, the underwriters exercised their over-allotment option to purchase an additional 930,000 shares from us at the public offering price of $26.00. The net proceeds from the offering to us including the over-allotment option, net of underwriting discounts and commissions of approximately $10.2 million were approximately $175.2 million. After deducting offering expenses of approximately $564,000, net proceeds to us were $174.6 million.

2. Summary of Significant Accounting Policies

Basis of Consolidation

The accompanying financial statements have been prepared in accordance with accounting principles generally accepted in the United States ("U.S. GAAP"). The accompanying consolidated financial statements include the accounts of Portola and its wholly owned subsidiary as of December 31, 2014. Unless otherwise specified, references to the Company are references to Portola and its consolidated subsidiary. All intercompany transactions and balances have been eliminated upon consolidation.

Use of Estimates

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities and the reported amounts of revenues and expenses in the financial statements and the accompanying notes. On an ongoing basis, management evaluates its estimates, including those related to revenue recognition, clinical trial accruals, fair value of assets and liabilities, income taxes and stock-based compensation. Management bases its estimates on historical experience and on various other market-specific and relevant assumptions that management believes to be reasonable under the circumstances. Actual results may differ from those estimates.

Variable Interest Entities

We review agreements we enter into with third party entities, pursuant to which we may have a variable interest in the entity, in order to determine if the entity is a variable interest entity (VIE). If the entity is a VIE, we assess whether or not we are the primary beneficiary of that entity. In determining whether we are the primary beneficiary of an entity, we apply a qualitative approach that determines whether we have both (1) the power to direct the economically significant activities of the entity and (2) the obligation to absorb losses of, or the right to receive benefits from, the entity that could potentially be significant to that entity. If we determine we are the primary beneficiary of a VIE, we consolidate the statements of operations and financial condition of the VIE into our consolidated financial statements. Our determination about whether we should consolidate such VIEs is made continuously as changes to existing relationships or future transactions may result in a consolidation or deconsolidation event.

Cash and Cash Equivalents

Cash and cash equivalents consist of cash and other highly liquid investments with original maturities of three months or less from the date of purchase.

Investments

All investments have been classified as "available-for-sale" and are carried at estimated fair value as determined based upon quoted market prices or pricing models for similar securities. Management determines the appropriate classification of our investments in debt securities at the time of purchase and reevaluates such designation as of each balance sheet date. Unrealized gains and losses are excluded from earnings and were reported as a component of accumulated comprehensive income (loss). Realized gains and losses and declines in fair value judged to be other than temporary, if any, on available-for-sale securities are included in interest and other income, net. The cost of securities sold is based on the specific-identification method. Interest on marketable securities is included in interest and other income, net.

Fair Value Measurements

Fair value accounting is applied for all financial assets and liabilities and non-financial assets and liabilities that are recognized or disclosed at fair value in the financial statements on a recurring basis (at least annually).

Concentration of Risk

Financial instruments that potentially subject us to concentrations of credit risk consist of cash, cash equivalents, receivables from collaborations and investments. Our investment policy limits investments to certain types of debt securities issued by the U.S. government, its agencies and institutions with investment-grade credit ratings and places restrictions on maturities and concentration by type and issuer. We are exposed to credit risk in the event of a default by the financial institutions holding our cash, cash equivalents and investments and issuers of investments to the extent recorded on the consolidated balance sheets.

Receivables from collaborations are typically unsecured and are concentrated in the pharmaceutical industry. Accordingly, we may be exposed to credit risk generally associated with pharmaceutical companies or specific to our collaboration agreements. To date, we have not experienced any losses related to these receivables.

Certain materials and key components that we utilize in our operations are obtained through single suppliers. Since the suppliers of key components and materials must be named in a new drug application (NDA) filed with the U.S. Food and Drug Administration (FDA) for a product, significant delays can occur if the qualification of a new supplier is required. If delivery of material from our suppliers were interrupted for any reason, we may be unable to supply any of our product candidates for clinical trials.

Customer Concentration

Customers that accounted for 10% or more of total revenues were as follows:

	Year Ended December 31,		
	2014	2013	2012
Bristol-Myers Squibb Company and Pfizer Inc.	16%	38%	–
Bayer Pharma, AG and Janssen Pharmaceuticals, Inc.	37%	37%	–
Daiichi Sankyo, Inc	45%	23%	–
Novartis, AG	–	–	97%

Property and Equipment

Property and equipment are stated at cost and depreciated using the straight-line method over the estimated useful lives of the assets, ranging from two to five years. Leasehold improvements are amortized over the shorter of their estimated useful lives or the related lease term.

Impairment of Long-Lived Assets

We review long-lived assets, including property and equipment, for impairment whenever events or changes in business circumstances indicate that the carrying amount of the assets may not be fully recoverable. An impairment loss would be recognized when estimated undiscounted future cash flows expected to result from the use of the asset and its eventual disposition are less than its carrying amount. Impairment, if any, is assessed using discounted cash flows or other appropriate measures of fair value. Through December 31, 2014, there have been no such losses.

Deferred Rent

We recognize rent expense on a straight-line basis over the noncancelable term of our operating lease and, accordingly, record the difference between cash rent payments and the recognition of rent expense as a deferred rent liability. We also record lessor-funded lease incentives, such as reimbursable leasehold improvements, as a deferred rent liability, which is amortized as a reduction of rent expense over the noncancelable term of our operating lease.

Revenue Recognition

We generate revenue from collaboration and license agreements for the development and commercialization of our products. Collaboration and license agreements may include non-refundable or partially refundable upfront license fees, partial or complete reimbursement of research and development costs, contingent consideration payments based on the achievement of defined collaboration objectives and royalties on sales of commercialized products. Our performance obligations under our collaborations include the transfer of intellectual property rights (licenses), obligations to provide research and development services and related clinical drug supply, obligation to provide regulatory approval services and obligations to participate on certain development and/or commercialization committees with the collaborators. Upfront payments are recorded as deferred revenue in our consolidated balance sheet and are recognized as collaboration revenue over our estimated period of performance that is consistent with the terms of the research and development obligations contained in each collaboration agreement. We regularly review the estimated periods of performance related to our collaborations based on the progress made under each arrangement. Our estimates of our performance period may change over the course of the collaboration term. Such a change could have a material impact on the amount of revenue we record in future periods.

Payments that are contingent upon achievement of a substantive milestone are recognized in their entirety in the period in which the milestone is achieved. A milestone is defined as an event that can only be achieved based on our performance and there is substantive uncertainty about whether the event will be achieved at the inception of the arrangement. Events that are contingent only on the passage of time or only on counterparty performance are not considered milestones subject to this guidance. Further, the amounts received must relate solely to prior performance, be reasonable relative to all of the deliverables and payment terms within the agreement and commensurate with our performance to achieve the milestone after commencement of the agreement. Payments contingent upon achievement of events that are not considered substantive milestones are allocated to the respective arrangements unit of accounting when received and recognized as revenue based on the revenue recognition policy for that unit of accounting.

Amounts from sales of licenses are recognized as revenue. Amounts received as funding of research and development or regulatory approval activities are recognized as revenue if the collaboration arrangement involves the sale of our research or development and regulatory approval services at amounts that exceed our cost. However, such funding is recognized as a reduction in research and development expense when we engage in a research and development project jointly with another entity, with both entities participating in project activities and sharing costs and potential benefits of the arrangement.

Amounts related to research and development and regulatory approval funding are recognized as the related services or activities are performed, in accordance with the contract terms. Payments may be made to or by us based on the number of full-time equivalent researchers assigned to the collaboration project and the related research and development expenses incurred.

Research and Development

Research and development costs are expensed as incurred and consist of salaries and benefits, lab supplies, materials and facility costs, as well as fees paid to other nonemployees and entities that conduct certain research and development activities on our behalf. Amounts incurred in connection with collaboration and license agreements are also included in research and development expense. Payments made prior to the receipt of goods or services to be used in research and development are capitalized until the goods are received or services are rendered.

Clinical Trial Accruals

Clinical trial costs are a component of research and development expenses. We accrue and expense clinical trial activities performed by third parties based upon actual work completed in accordance with agreements established with clinical research organizations and clinical sites. We determine the actual costs through monitoring patient enrollment and discussions with internal personnel and external service providers as to the progress or stage of completion of trials or services and the agreed-upon fee to be paid for such services. The Company has not experienced any material deviations between the accrued clinical trial expenses and actual clinical trial expenses. However, actual services performed, number of patients enrolled and the rate of patient enrollment may vary from our estimates, resulting in adjustments to clinical trial expense in futures periods.

Stock-Based Compensation

Stock-based awards issued to employees, are recorded at fair value as of the grant date using the Black-Scholes option-pricing model and recognized as expense on a straight-line basis over the vesting period of the award. Because noncash stock compensation expense is based on awards ultimately expected to vest, it is reduced by an estimate for future forfeitures. Forfeitures are estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from estimates.

Equity instruments issued to nonemployees, consisting of stock options granted to consultants, are valued using the Black-Scholes option-pricing model. Stock-based compensation expense for nonemployee services is subject to remeasurement as the underlying equity instruments vest and is recognized as an expense over the period during which services are received.

Income Taxes

We provide for income taxes under the asset and liability method. Current income tax expense or benefit represents the amount of income taxes expected to be payable or refundable for the current year. Deferred income tax assets and liabilities are determined based on differences between the consolidated financial statement reporting and tax bases of assets and liabilities and net operating loss and credit carryforwards, and are measured using the enacted tax rates and laws that will be in effect when such items are expected to reverse. Deferred income tax assets are reduced, as necessary, by a valuation allowance when management determines it is more likely than not that some or all of the tax benefits will not be realized. The recognition, derecognition and measurement of a tax position is based on management's best judgment given the facts, circumstances and information available at the reporting date. Our policy is to recognize interest and penalties related to the underpayment of income taxes as a component of income tax expense or benefit. To date, there have been no interest or penalties charged in relation to the underpayment of income taxes.

Foreign Currency Transactions and Hedging

We have transactions denominated in foreign currencies, primarily the Euro, and, as a result, are exposed to changes in foreign currency exchange rates. We manage a portion of these cash flow exposures through the purchase of Euros and the use of foreign currency forward contracts. Our foreign currency forward contracts are not designated as hedges for accounting purposes. Gains or losses on foreign currency forward contracts are intended to offset gains or losses on the underlying net exposures in an effort to reduce the earnings and cash flow volatility resulting from fluctuating foreign currency exchange rates. Foreign currencies and our foreign currency forward contracts are marked to market at the end of each period and recorded as interest and other income, net in the consolidated statements of operations.

Our foreign exchange forward contracts expose us to credit risk to the extent that the counterparty, a major financial institution, is unable to meet the terms of the agreement. Our management does not expect material losses as a result of defaults by the counterparty.

Net Income (Loss) per Share Attributable to Common Stockholders

Basic and diluted net income (loss) per share attributable to common stockholders is calculated in conformity with the two-class method required for companies with participating securities. Under the two-class method, in periods when we have net income, basic net income attributable to common stockholders is determined by allocating undistributed earnings, calculated as net income less current period convertible preferred stock noncumulative dividends, between the common stock and the convertible preferred stock. In computing diluted net income attributable to common stockholders, undistributed earnings are re-allocated to reflect the potential

impact of dilutive securities. Basic net loss per share attributable to common stockholders is calculated by dividing the net loss attributable to common stockholders by the weighted-average number of shares of common stock outstanding for the period. The diluted net income per share attributable to common stockholders is computed by giving effect to all potential dilutive common stock equivalents outstanding for the period. In periods when we have incurred a net loss, convertible preferred stock, options and warrants to purchase common stock and convertible preferred stock warrants are considered common stock equivalents but have been excluded from the calculation of diluted net loss per share attributable to common stockholders as their effect is antidilutive.

Recent Accounting Pronouncements

In May 2014, the FASB, jointly with the International Accounting Standards Board, issued, issued ASU 2014-09, *Revenue from Contracts with Customers*. The standard's core principle is that a reporting entity will recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In applying this new guidance to contracts within its scope, an entity will: (1) identify the contract(s) with a customer, (2) identify the performance obligation in the contract, (3) determine the transaction price, (4) allocate the transaction price to the performance obligations in the contract, and (5) recognize revenue when (or as) the entity satisfies a performance obligation. Additionally, this new guidance will require significantly expanded revenue recognition disclosures. This guidance will become effective for us beginning in the first quarter of 2017. Early application is not permitted. Entities have the option of using either a full retrospective or a modified retrospective approach to adopt this new guidance. We are currently evaluating the impact of our pending adoption of this standard on our consolidated financial statements.

3. Fair Value Measurements

Financial assets and liabilities are recorded at fair value. The carrying amounts of certain of our financial instruments, including cash and cash equivalents, short-term investments, receivables from collaborations, prepaid expenses and other current assets and accounts payable, accrued compensation and employee benefits, accrued and other liabilities and deferred revenue, approximate their fair value due to their short maturities. The accounting guidance for fair value provides a framework for measuring fair value, clarifies the definition of fair value and expands disclosures regarding fair value measurements. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (an exit price) in an orderly transaction between market participants at the reporting date. The accounting guidance establishes a three-tiered hierarchy, which prioritizes the inputs used in the valuation methodologies in measuring fair value as follows:

Level 1 – Inputs are unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date.

Level 2 – Inputs (other than quoted market prices included in Level 1) are either directly or indirectly observable for the asset or liability through correlation with market data at the measurement date and for the duration of the instrument’s anticipated life.

Level 3 – Inputs reflect management’s best estimate of what market participants would use in pricing the asset or liability at the measurement date. Consideration is given to the risk inherent in the valuation technique and the risk inherent in the inputs to the model.

A financial instrument’s categorization within the valuation hierarchy is based upon the lowest level of input that is significant to the fair value measurement. Where quoted prices are available in an active market, securities are classified as Level 1. We classify money market funds as Level 1. When quoted market prices are not available for the specific security, then we estimate fair value by using quoted prices for identical or similar instruments in markets that are not active and model-based valuation techniques for which all significant inputs are observable in the market or can be corroborated by observable market data for substantially the full term of the assets. Where applicable, these models project future cash flows and discount the future amounts to a present value using market-based observable inputs obtained from various third party data providers, including but not limited to, benchmark yields, interest rate curves, reported trades, broker/dealer quotes and market reference data. We classify our corporate notes, commercial paper, U.S. government agency securities and foreign currency forward contracts as Level 2. We have elected to use the income approach to value the foreign currency forward contracts, using observable Level 2 market expectations at the measurement date and standard valuation techniques to convert future amounts to a single present amount assuming that participants are motivated, but not compelled to transact. Level 2 inputs for the valuations are limited to quoted prices for similar assets or liabilities in active markets and inputs other than quoted prices that are observable for the asset or liability (specifically foreign currency spot and forward rates, and credit risk at commonly quoted intervals). Mid-market pricing is used as a practical expedient for fair value measurements. The fair value measurement of any asset or liability must reflect the non-performance risk of the entity and the counterparty to the transaction. Therefore, the impact of the counterparty’s creditworthiness, when in an asset position, and our creditworthiness, when in a liability position, has also been factored into the fair value measurement of the derivative instruments and did not have a material impact on the fair value of these derivative instruments. Both we and the counterparty are expected to continue to perform under the contractual terms of the instruments.

There were no transfers between Level 1 and Level 2 during the periods presented.

In certain cases where there is limited activity or less transparency around inputs to valuation, securities are classified as Level 3. Our convertible preferred stock warrant liability was classified as Level 3. The fair values of the convertible preferred stock warrants were measured using the Black-Scholes option-pricing model. Inputs used to determine estimated fair value included the estimated fair value of the underlying preferred stock at the valuation measurement date, the remaining contractual term of the warrants, risk-free interest rates, expected dividends and estimated volatility. Estimated volatility is based on the volatility of our peer group. We monitor the historical volatility of peer group companies on a quarterly basis and adjust our estimated volatility when significant changes in the peer group volatilities occur. The significant unobservable input used in the fair value measurement of the convertible preferred stock warrant liability is the fair value of the underlying preferred stock at the valuation remeasurement date. The preferred stock warrants were converted to common stock warrants upon the completion of the IPO and were no longer subject to remeasurement.

The following table sets forth the fair value of our financial assets and liabilities, allocated into Level 1, Level 2 and Level 3, that was measured on a recurring basis (in thousands):

	December 31, 2014			
	Level 1	Level 2	Level 3	Total
Financial Assets:				
Money market funds	$ 24,915	$ –	$ –	$ 24,915
Corporate notes and commercial paper	–	226,047	–	226,047
U.S. government agency securities	–	120,169	–	120,169
Total financial assets	$ 24,915	$ 346,216	$ –	$ 371,131

	December 31, 2013			
	Level 1	Level 2	Level 3	Total
Financial Assets:				
Money market funds	$ 57,296	$ –	$ –	$ 57,296
Corporate notes and commercial paper	–	182,472	–	182,472
U.S. government agency securities	–	75,289	–	75,289
Foreign currency forward contracts	–	372	–	372
Total financial assets	$ 57,296	$ 258,133	$ –	$ 315,429

Level 3 liabilities include the convertible preferred stock warrant liability. The following table sets forth a summary of the changes in the estimated fair value of our convertible preferred stock warrants, which were measured at fair value on a recurring basis (in thousands):

Balance as of December 31, 2011	766
Recognized gain	(83)
Balance as of December 31, 2012	683
Recognized gain	(24)
Reclassification of warrant liability to additional paid-in capital	(659)
Balance as of December 31, 2013	$ –

The estimated fair value of the convertible preferred stock warrants outstanding through May 22, 2013, the date the remeasurement was no longer applicable, and the year ended December 31, 2012 was determined using the Black-Scholes option-pricing model using the following assumptions:

	May 22, 2013	December 31, 2012
Risk-free interest rate	0.1 - 0.9%	0.3 - 0.6%
Estimated term equal to the remaining contractual term	1.7 - 3.8 years	2.1 - 4.2 years
Volatility	79%	82%
Dividend yield	–	–

4. Financial Instruments

Cash equivalents and short-term and long-term investments, all of which are classified as available-for-sale securities, consisted of the following (in thousands):

	December 31, 2014				December 31, 2013			
	Cost	Unrealized Gains	Unrealized (Losses)	Estimated Fair Value	Cost	Unrealized Gains	Unrealized (Losses)	Estimated Fair Value
Money market funds	$ 24,915	$ –	$ –	$ 24,915	$ 57,296	$ –	$ –	$ 57,296
Corporate notes and commercial paper	226,209	8	(170)	226,047	182,426	62	(16)	182,472
U.S. government agency securities	120,246	4	(81)	120,169	75,278	23	(12)	75,289
	$371,370	$ 12	$ (251)	$ 371,131	$315,000	$ 85	$ (28)	$ 315,057
Classified as:								
Cash equivalents				$ 36,341				$ 113,794
Short-term investments				251,759				150,892
Long-term investments				83,030				50,371
Total cash equivalents and investments				$ 371,131				$ 315,057

At December 31, 2014, the remaining contractual maturities of available-for-sale securities were less than two years. There have been no significant realized gains or losses on available-for-sale securities for the periods presented. Available-for-sale debt securities that were in a continuous loss position but were not deemed to be other than temporarily impaired were immaterial at both December 31, 2014 and 2013.

5. Derivative Instruments

We are exposed to foreign currency exchange rates related to our business operations. To reduce our risks related to these exposures, we utilize certain derivative instruments, namely foreign currency forward contracts. We do not use derivatives for speculative trading purposes.

We enter into foreign currency forward contracts, none of which are designated as hedging transactions for accounting purposes, to reduce our exposure to foreign currency fluctuations of certain liabilities denominated in foreign currencies. These exposures are hedged on a quarterly basis. We held no foreign currency forward contracts at December 31, 2014. As of December 31, 2013, we had foreign currency forward contracts with notional amounts of €7.7 million ($10.6 million based on the exchange rate as of December 31, 2013). As of December 31, 2013, we recorded a derivative asset within prepaid expenses and other current assets of $372,000 related to these foreign currency forward contracts.

For the years ended December 31, 2014 and 2013, we recorded an unrealized loss of $114,000 and an unrealized gain of $261,000 , respectively, in interest and other income, net on our consolidated statement of operations related to these foreign currency forward contracts. During the year ended December 31, 2014, we settled foreign currency forward contracts and recognized a realized loss of $258,000 in interest and other income (expense), net. During the year ended December 31, 2013, we settled foreign currency forward contracts and recognized a realized gain of $60,000 in interest and other income (expense), net.

Our derivative financial instruments present certain market and counterparty risks. In general, the market risk related to these contracts is offset by corresponding gains and losses on the hedged transactions. The credit risk associated with these contracts is driven by changes in interest and currency exchange rates and, as a result, varies over time.

6. Balance Sheet Components

Property and Equipment

Property and equipment consists of the following (in thousands):

	December 31,	
	2014	2013
Computer equipment	$ 734	$ 618
Capitalized software	674	463
Equipment	4,852	3,690
Leasehold improvements	4,217	3,988
	10,477	8,759
Less accumulated depreciation and amortization	(7,701)	(6,159)
Property and equipment, net	$ 2,776	$ 2,600

Accrued and Other Liabilities

Accrued and other liabilities consist of the following (in thousands):

	December 31,	
	2014	2013
Research and development related	$ 12,545	$ 16,110
Legal and accounting fees	354	462
Deferred rent	127	879
Other	940	345
Total accrued liabilities	$ 13,966	$ 17,796

7. Collaboration and License Agreements

Summary of Collaboration and License Revenue

We have recognized revenue from our collaboration and license agreements as follows (in thousands):

	Year Ended December 31,		
	2014	2013	2012
Novartis:			
Recognition of upfront license fee	$ –	$ –	$ 53,846
Reimbursement of research and development expense	–	–	16,238
Novartis total	–	–	70,084
BMS and Pfizer:			
Recognition of research and development services	1,497	4,042	1,958
BMS and Pfizer total	1,497	4,042	1,958
Bayer and Janssen:			
Recognition of research and development services	3,598	3,876	–
Bayer and Janssen total	3,598	3,876	–
Lee's:			
Recognition of research and development services	243	194	–
Lee's total	243	194	–
Daiichi Sankyo:			
Recognition of research and development services	4,287	2,419	–
Daiichi Sankyo total	4,287	2,419	–
Total collaboration and license revenue	$ 9,625	$ 10,531	$ 72,042

Novartis Pharma A.G. ("Novartis")

In February 2009, we entered into an exclusive worldwide license agreement with Novartis to develop and commercialize Elinogrel, which was amended in December 2010 and terminated effective July 1, 2012. Under the terms of the license agreement, Novartis made an upfront cash payment to us of $75.0 million in exchange for an exclusive worldwide license to develop and commercialize Elinogrel. We were eligible to receive additional cash payments totaling up to $505.0 million upon achievement by Novartis of certain development, regulatory and commercialization milestones. We were obligated to participate on a Joint Steering Committee and a Joint Development Committee (collectively, the "Committees") with Novartis through December 31, 2018, to oversee development activities related to Elinogrel, unless Novartis agreed to disband the Committees at an earlier date. Pursuant to the license agreement, Novartis was obligated to fund development and commercialization expenses for Elinogrel after January 1, 2009, except for the first $18.0 million of Phase 2 clinical trial costs and selected tasks, which we were obligated to fund.

We identified the following performance obligations under the license agreement with Novartis: 1) the transfer of intellectual property rights (license), 2) the obligation to provide certain limited research and development services early during the term of the license agreement and 3) the obligation to participate on the Committees. We accounted for these deliverables as a single unit of accounting, as there was no objective and reliable evidence of the fair value of our undelivered performance obligation with respect to participation on the Committees. The amounts we received from Novartis for the upfront license fee and collaborative research efforts were recognized as collaboration revenue on a straight-line basis from the effective date of payment over the expected performance period.

We estimated the term of our obligation to participate in the Committees to extend through December 31, 2018. In April 2012, we and Novartis agreed to a plan to return all rights to Elinogrel to Portola and to terminate the exclusive worldwide license agreement effective July 1, 2012. In connection with this plan, the expected term of our obligation to participate in the Committees changed from December 31, 2018 to July 1, 2012. The change in term of the obligation to participate in the Committees was accounted for as a change in accounting estimate on a prospective basis effective April 1, 2012. The change resulted in a $65.1 million increase in collaboration revenue due to the recognition of all remaining revenue that would have otherwise been recorded over the obligation period through December 31, 2018. Absent this acceleration, the net income for the year ended December 31, 2012 would have been lower by $65.1 million, resulting in a net loss of $53.7 million and net loss per share would have been $3.98 compared to net income per share of $0.00 as reported. As a result of terminating the agreement, all remaining deferred revenue was recognized immediately, as no further performance obligations remained upon termination. As of the time of termination, no milestones had been achieved and no royalties had been triggered under our agreement with Novartis.

Biogen Idec, Inc. ("Biogen Idec")

In October 2011, we entered into an exclusive, worldwide license and collaboration agreement with Biogen Idec, which was subsequently converted by its terms into a fully out-licensed agreement, under which Portola and Biogen Idec were to jointly develop and commercialize highly selective, novel oral Syk inhibitors for the treatment of autoimmune and inflammatory diseases, including rheumatoid arthritis, allergic asthma and systemic lupus erythematosus.

We led the initial development effort for the Syk inhibitor program until commencement of the first Phase 2 clinical trial in late 2012. At that time, Biogen Idec assumed responsibility to lead the global development and commercialization efforts in major indications such as rheumatoid arthritis and allergic asthma. We had the option to elect to lead U.S. development and commercialization efforts for select smaller indications as well as discovery efforts for follow-on Syk inhibitors and retained an option to co-promote the drug alongside Biogen Idec in the United States in major indications. On a product-by-product basis, we had and exercised an option to opt out of our co-funding obligation of the development of such product. Pursuant to this option, we also relinquished our right to share profits from sales of such product(s), but are entitled to receive royalties from Biogen Idec's sales of these products.

Under the terms of the agreement, Biogen Idec provided us with a non-refundable upfront cash license fee of $36.0 million and paid $9.0 million for the purchase of 636,042 shares of our Series 1 convertible preferred stock at a premium of $1.1 million above the stock's estimated fair value. In addition, we estimated that the agreement would provide $22.9 million for the partial reimbursement of certain research and development services and related committee participation and delivery of drug materials.

We identified the following four non-contingent performance deliverables under the license agreement: 1) the transfer of intellectual property rights (license), 2) the obligation to provide research and development services, 3) the manufacture of drug material for development purposes, until commencement of the first Phase 2 clinical trial and 4) the obligation to participate on various committees. We have the right to opt out of any committees at any time after November 2013.

We considered the provisions of the multiple-element arrangement guidance in determining whether the deliverables outlined above have standalone value. We believe that Biogen Idec has research and development expertise with compounds similar to those licensed under the agreement and has the ability to engage other third parties to develop these compounds allowing Biogen Idec to realize the value of the license without receiving any of the remaining deliverables. Additionally, under the agreement, Biogen Idec has the right to sublicense this license to third parties, substantially with all the same rights and responsibilities. Therefore, the research and development services, participation in committee activities and provision of drug materials are deemed to have standalone value as Biogen Idec could negotiate for and/or acquire these from other third parties. Although participation in committee activities and provision of drug materials have standalone value, they will be delivered and utilized as the research and development services are performed and have a similar pattern of performance. These three deliverables are combined as one unit of accounting. There are no rights of return under the agreement.

The upfront license fee of $36.0 million, the premium on the purchase of our Series 1 convertible preferred stock of $1.1 million and research and development expense reimbursements of $22.9 million were allocated to the two separate units of accounting using the relative estimated selling price method.

The arrangement consideration allocated to the license was recognized as collaboration and license revenue upon delivery in 2011. The amount allocated to the research and development services, materials and committee participation unit of accounting was being recognized over our estimated non-cancellable performance period of two years as a reduction to research and development expense. Under the terms of the agreement, we and Biogen Idec jointly shared development responsibilities prior to the conversion of this agreement into a fully out-licensed agreement, as if the two parties to the agreement incurred those costs directly.

Based upon the relative estimated selling prices for the two units of accounting for the year ended December 31, 2011, we recognized collaboration revenue of $37.1 million and recorded a reduction in research and development expense for amounts owed by Biogen Idec to us under the cost-sharing terms of the agreement totaling $734,000.

In November 2012, we elected to exercise our option under our agreement with Biogen Idec to convert the agreement to a fully out-licensed agreement. After such election, we relinquished our right to share profits from sales of products related to PRT2607 and other selective Syk inhibitors, but are entitled to receive royalties from sales of these products by Biogen Idec. We no longer have the responsibility to fund the program under the agreement. The out-licensed agreement now provides for future payments to us of up to approximately $370.0 million based on the occurrence of certain development and regulatory events. Biogen Idec has elected to assume all future development work for Syk inhibitors, including the major indications, such as allergic asthma. This agreement will continue in force until either party terminates the agreement pursuant to the agreement or until the expiration of Biogen Idec's royalty obligations pursuant to the agreement. Biogen Idec may terminate the agreement without cause upon 120 days' notice. In such event, we would regain all development rights and Biogen Idec would have no further payment obligations pursuant to the agreement. As of December 31, 2014, no such termination event has occurred.

In April 2014, we entered into an amendment to the Biogen Idec license and collaboration agreement under which Biogen Idec released one of the Syk kinase inhibitors to us for use in topical ophthalmic indications. Per the terms of the amendment, we will be required to pay $15.0 million upon the completion of certain commercial milestones and pay royalties on sales of products approved for these Syk kinase inhibitors. There was no accounting effect resulting from this amendment.

During the years ended December 31, 2014, 2013 and 2012, we recorded a reduction in research and development expense of $210,000, $804,000 and $6.5 million, respectively, owed by Biogen Idec to us under the cost-sharing terms of the agreement.

As of December 31, 2014, no milestone in the agreement had been achieved and no royalties had been triggered under this agreement.

Bristol-Myers Squibb Company ("BMS") and Pfizer Inc. ("Pfizer")

In October 2012, we entered into a three-way agreement with BMS and Pfizer to include subjects dosed with apixaban, their jointly owned product candidate, in one of our Phase 2 proof-of-concept studies of Andexanet alfa. We are responsible for the cost of conducting this clinical study. BMS and Pfizer will work closely with us on both development and regulatory aspects of Andexanet alfa in connection with our Phase 2 proof-of-concept studies to the extent such matters relate to apixaban. Pursuant to our agreement with BMS and Pfizer we are obligated to provide research and development services and participate on various committees. We originally estimated the period of performance of our obligations to extend through the second quarter 2013. During 2013, we added more cohorts than originally planned as part of the original study design at the inception of our agreement and therefore revised our estimated period of performance to be through the fourth quarter of 2013. The effects of these changes in estimates were not significant.

The total consideration under this agreement of $6.0 million was recognized as revenue on a straight-line basis over the estimated performance period through the fourth quarter of 2013. For the year ended December 31, 2013 and 2012, we recognized $4.0 and $2.0 million in collaboration revenue, respectively.

In January 2014, we entered into a collaboration agreement with BMS and Pfizer to further study Andexanet alfa as a reversal agent for their jointly owned FDA approved oral Factor Xa inhibitor, apixaban, through Phase 3 studies. We initiated Phase 3 studies in the first half of 2014. We are responsible for the cost of conducting this clinical study. Pursuant to our agreement with BMS and Pfizer we are obligated to provide research, development and regulatory approval services and participate in the Joint Collaboration Committee ("JCC") in exchange for a partially refundable upfront fee of $13.0 million and up to $12.0 million of contingent milestone payments due upon achievement of certain development and regulatory events. All consideration received and to be earned under this agreement is subject to a 50% refund contingent upon certain regulatory and/or clinical events.

We concluded that the January 2014 and October 2012 contracts should each be accounted for as standalone agreements. We identified the following non-cancellable performance deliverables under the January 2014 agreement: 1) the obligation to provide research and development services, which include manufacturing and supplying Andexanet alfa and providing various reports, 2) the obligation to provide regulatory approval services, and 3) the obligation to participate on the JCC. We considered the provisions of the multiple-elements arrangement guidance in determining how to recognize the total agreement consideration. We determined that none of the deliverables have standalone value and all of these obligations will be delivered throughout the estimated period of performance and therefore are accounted for as a single unit of accounting. The non-contingent upfront consideration under this agreement of $6.5 million is being recognized on a straight-line basis over the estimated period of performance. In the third quarter of 2014, we revised the remaining estimated period of performance from the first quarter of 2017 to the first quarter of 2018 to reflect a modification to our clinical development and regulatory plans. The contingent upfront consideration of $6.5 million will be recognized if and when the refundable nature of these amounts lapses based upon the achievement of specified regulatory and/or clinical events.

The contingent milestone payments under the January 2014 agreement are not considered substantive because a portion may be refunded upon certain events. The non-contingent portion of any milestone payments will be recognized as collaboration revenue on a straight-line basis from their receipt date thru the estimated remaining period of performance. The contingent portion of the milestone payments will be recognized upon receipt if and when the refundable nature of these amounts lapses based upon the achievement of specified regulatory and/or clinical events. None of these milestones had been earned or received at December 31, 2014.

During the year ended December 31, 2014 we recognized $1.5 million in collaboration revenue under this agreement. The deferred revenue balance under this agreement as of December 31, 2014 was $11.5 million.

Lee's Pharmaceutical (HK) Ltd ("Lee's")

In January 2013, we entered into an agreement with Lee's to jointly expand our Phase 3 APEX Study of Betrixaban into China. Under the terms of the agreement, Lee's provided us with an upfront and non-refundable fee of $700,000 and will reimburse our costs in connection with the expansion of the APEX study into China. Lee's will lead this study and the regulatory interactions with China's State Food and Drug Administration. We granted Lee's an exclusive option to negotiate for the exclusive commercial rights to Betrixaban in China, which may be exercised by Lee's for 60 days after it receives the primary data analysis report from the Phase 3 APEX study.

We identified the following deliverables under the agreement with Lee's: 1) the granting of an exclusive option to negotiate for the exclusive commercial rights to Betrixaban in China, 2) the obligation to manufacture and supply product in support of the APEX study in China, 3) the obligation to participate in a joint working group, and 4) the delivery of the primary data analysis report from the APEX study. We considered the provisions of the multiple-element arrangement guidance in determining how to recognize the total consideration of the agreement. We determined that none of the deliverables have standalone value and therefore are accounted for as a single unit of accounting with the upfront fee recognized as revenue on a straight-line basis over the estimated period of performance through the first quarter of 2016. Any reimbursements we may receive from Lee's for the costs we incur in connection with this agreement have not been material.

For the year ended December 31, 2014 and 2013, we recognized $243,000 and $194,000 of collaboration revenue under this agreement, respectively. The deferred revenue balance as of December 31, 2014 was $263,000.

Bayer Pharma, AG ("Bayer") and Janssen Pharmaceuticals, Inc. ("Janssen")

In February 2013, we entered into a three-way agreement with Bayer and Janssen to include subjects dosed with rivaroxaban, their Factor Xa inhibitor product, in one of our Phase 2 proof-of-concept studies of Andexanet alfa. We are responsible for the cost of conducting this clinical study. Under the terms of the agreement, Bayer and Janssen have each provided us with an upfront and non-refundable fee of $2.5 million, for total consideration of $5.0 million. The agreement also provides for additional non-refundable payments to us from Bayer and Janssen of $250,000 each for an aggregate of $500,000 following the delivery of the final written study report of our Phase 2 proof-of-concept studies of Andexanet alfa. Also, we are obligated to participate on a Joint Collaboration Committee ("JCC") with Bayer and Janssen to oversee the collaboration activities under the agreement.

We identified the following performance deliverables under the agreement: 1) the obligation to provide research and development services, which includes supplying Andexanet alfa and providing a final written report, and 2) the obligation to participate on the JCC. We considered the provisions of the multiple-element arrangement guidance in determining how to recognize the revenue associated with these two deliverables. We have accounted for the research and development services and our participation on the JCC as a single unit of accounting as neither deliverable has standalone value and both obligations will be delivered throughout the estimated period of performance. We originally estimated the period of performance to be through the fourth quarter of 2013. During 2013, we added more cohorts than originally planned as part of the original study design at the inception of our agreement and therefore adjusted our period of performance to be through the fourth quarter of 2014. The total upfront consideration under this agreement was recognized as revenue on a straight-line basis over the performance period through the fourth quarter of 2014.

For the year ended December 31 2014 and 2013, we recognized $1.1 million and $3.9 million in collaboration revenue, respectively. There was no deferred revenue balance under this agreement as of December 31, 2014.

In January 2014, we entered into a three-way agreement with Bayer and Janssen to study the safety and efficacy of Andexanet alfa as a reversal agent to their oral Factor Xa inhibitor, rivaroxaban, in our Phase 3 studies. We are responsible for the cost of conducting this clinical study. Pursuant to our agreement with Bayer and Janssen we are obligated to provide research, development and regulatory services and to participate in a JCC in exchange for an upfront nonrefundable fee of $10.0 million, up to three contingent payments totaling $7.0 million which are payable upon achievement of certain events associated with scaling up our manufacturing process to support a commercial launch, and up to three payments totaling $8.0 million which are payable upon initiation of our Phase 3 study and regulatory approval of Andexanet alfa as a reversal agent to rivaroxaban by the FDA and European Medicines Agency ("EMA").

We identified the following non-cancellable performance deliverables under the agreement: 1) the obligation to provide research and development services, which include manufacturing and supplying Andexanet alfa and providing various reports, 2) the obligation to provide regulatory approval services, and 3) the obligation to participate on the JCC. We considered the provisions of the multiple-element arrangement guidance in determining how to recognize the total consideration of the agreement. We determined that none of the deliverables have standalone value; all of these obligations will be delivered throughout the estimated period of performance and therefore are accounted for as a single unit of accounting. The total upfront consideration under this agreement is being recognized as revenue on a straight-line basis over the estimated period of performance period. In the third quarter of 2014 we updated our estimated period of performance from the first quarter of 2017 to the first quarter of 2018 to reflect a modification to our clinical development and regulatory plans.

We have determined all but one of the future contingent payments meet the definition of a milestone and that such milestones are substantive in that the consideration is reasonable relative to all of the deliverables and payment terms within the agreement and commensurate with our performance to achieve the milestone after commencement of the agreement. Accordingly, revenue for the achievement of these milestones will be recognized in the period when the milestone is achieved and collectability is reasonably assured. As of December 31, 2014, no amounts had been recognized as collaboration revenue for any of these milestones. The continent payment of $3.0 million not considered to be a substantive milestone was received in the third quarter of 2014 and is being recognized as collaboration revenue on a straight-line basis over the estimated remaining performance period through the first quarter of 2018.

During the year ended December 31, 2014 we recognized $2.5 million in collaboration revenue under this agreement. The deferred revenue balance under this agreement as of December 31, 2014 was $10.5 million.

Aciex Therapeutics, Inc. ("Aciex")

In February 2013, we entered into a license and collaboration agreement with Aciex pursuant to which we granted Aciex an exclusive license to co-develop and co-commercialize Cerdulatinib (PRT2070) and certain related compounds for nonsystemic indications, such as the treatment and prevention of ophthalmological diseases by topical administration and allergic rhinitis by intranasal administration. In April 2014, this agreement was amended to release all rights for Cerdulatinib to Portola. The collaboration is now focused on development of other related compounds for topical ophthalmic indications. There were no accounting consequences associated with the amendment. Under the terms of this risk and cost sharing agreement, Portola and Aciex will each incur and report their own internal research and development costs. Further, third-party related development costs will be shared by Aciex and us 60% and 40%, respectively, until the end of the Phase 2 clinical study, and then equally afterwards. Also, we are entitled to receive either one-half of the profits, if any, generated by future sales of the products developed under the agreement, or royalty payments. Aciex has the primary responsibility for conducting the research and development activities under this agreement. We are obligated to provide assistance in accordance with the agreed upon development plan as well as participate on various committees. We can opt out of our obligation to share in the development costs at various points in time, the timing of which impacts future royalties we may receive based on product sales made by Aciex. All net costs we incur in connection with this agreement will be recognized as research and development expenses. During 2014 and 2013, no such costs have been incurred related to this agreement.

In July 2014, Aciex was acquired by Nicox S.A. and the acquisition closed in October 2014. As of December 31, 2014, there has been no change to our agreement with Aciex.

Daiichi Sankyo, Inc. ("Daiichi Sankyo")

In June 2013, we entered into an agreement with Daiichi Sankyo to include subjects dosed with edoxaban, their Factor Xa inhibitor product, in one of our Phase 2 proof-of-concept studies of Andexanet alfa. We are responsible for the cost of conducting this clinical study. Under the terms of the agreement, Daiichi Sankyo will provide us with an upfront fee of $6.0 million, $3.0 million of which was subject to refund should Daiichi Sankyo decide to terminate the agreement. We are obligated to participate on a JCC with Daiichi Sankyo to oversee the collaboration activities under the agreement.

We identified the following performance deliverables under the agreement: 1) the obligation to provide research and development services, which includes supplying Andexanet alfa and providing a final written report, and 2) the obligation to participate on the JCC.

We considered the provisions of the multiple-element arrangement guidance in determining how to recognize the revenue associated with these two deliverables. We have accounted for the research and development services and our participation on the JCC as a single unit of accounting as neither deliverable has standalone value and both obligations will be delivered throughout the estimated period of performance. We originally estimated the non-contingent consideration under this agreement of $3.0 million would be recorded as revenue on a straight-line basis over the estimated non-contingent performance period through the second quarter of 2014. In December 2013, the JCC agreed to forego certain preclinical studies that were planned in the original study design at the inception of the agreement. As a result of this change, we updated our non-contingent performance period to be through the first quarter of 2014. The recognition of contingent consideration under this agreement of $3.0 million commenced upon resolution of the contingency in the first quarter of 2014 and was originally being recognized over the estimated performance period through the first quarter of 2015. During the fourth quarter of 2014 we decided to include edoxaban data in our initial BLA filing and thus updated the performance period associated with the contingent payment to be through the fourth quarter of 2015.

For the year ended December 31, 2014, we recognized $2.5 million in collaboration revenue associated with the contingent and the non-contingent element of the arrangement. For the year ended December 31, 2013, we recognized $2.4 million in collaboration revenue associated with the non-contingent element of the arrangement. The deferred revenue balance under this agreement as of December 31, 2014 was $1 million.

In July 2014, we entered into an agreement with Daiichi Sankyo to study the safety and efficacy of Andexanet alfa as a reversal agent to their oral Factor Xa inhibitor, edoxaban, in our Phase 3 and Phase 4 studies. We are responsible for the cost of conducting these clinical studies. Pursuant to our agreement with Daiichi Sankyo we are obligated to provide research, development and regulatory services and to participate in a JCC in exchange for an upfront nonrefundable fee of $15.0 million, up to two contingent payments totaling $5.0 million which are payable upon the initiation of our Phase 3 study and achievement of certain events associated with scaling up our manufacturing process to support a commercial launch, and up to four payments totaling $20.0 million which are payable upon acceptance of filing and regulatory approval of Andexanet alfa as a reversal agent to edoxaban by the FDA and EMA.

We identified the following non-cancellable performance deliverables under the agreement: 1) the obligation to provide research and development services, which include manufacturing and supplying Andexanet alfa and providing various reports, 2) the obligation to provide regulatory approval services, and 3) the obligation to participate on the JCC. We considered the provisions of the multiple-element arrangement guidance in determining how to recognize the total consideration of the agreement. We determined that none of the deliverables have standalone value; all of these obligations will be delivered throughout the estimated period of performance and therefore are accounted for as a single unit of accounting. The total upfront consideration under this agreement is being recognized as revenue on a straight-line basis over the estimated performance period through the third quarter of 2018.

We have determined all but one of the future contingent payments meet the definition of a milestone and that such milestones are substantive in that the consideration is reasonable relative to all of the deliverables and payment terms within the agreement are commensurate with our performance to achieve the milestone after commencement of the agreement. Accordingly, revenue for the achievement of these milestones will be recognized in the period when the milestone is achieved and collectability is reasonably assured. As of December 31, 2014, no amounts had been recognized as collaboration revenue for any of these milestones. Amounts for the continent payment not considered to be a substantive milestone will be deferred when received and recognized as collaboration revenue on a straight-line basis over the remaining estimated performance period.

During the year ended December 31, 2014 we recognized $1.8 million in collaboration revenue under this agreement. The deferred revenue balance under this agreement as of December 31, 2014 was $13.2 million.

8. Commercial Supply Agreement

In July 2014, we entered into an agreement with CMC ICOS Biologics, Inc. (“CMC Biologics”), a subsidiary of CMC Biologics S.à.r.l., a privately-held contract manufacturing organization, pursuant to which CMC Biologics will manufacture clinical and commercial supply of Andexanet alfa.

Under the agreement, we are required to purchase an aggregate fixed number of batches of Andexanet alfa from CMC Biologics beginning in 2015 through 2021. Total batch commitments under the agreement can be increased or decreased based on the achievement of milestones relating to the regulatory approval process for Andexanet alfa, expansion of existing manufacturing capacity and operational qualification of CMC Biologics’ manufacturing facilities. We made an upfront payment to CMC Biologics in the amount of $10.0 million in July 2014 and have made a reservation payment to CMC Biologics of $4.6 million in November 2014. Both payments will be credited against our future purchases of batches under the agreement.

Total fixed commitments under the agreement for the purchases of clinical and commercial batches, not taking into account possible price and batch adjustments per the terms of the agreement, are approximately $293.9 million. Payments made under the agreement as of December 2014 amount to $2.6 million.

The term of the agreement is seven years and may be early terminated by either party for the other party’s uncured material breach or insolvency. We may also terminate the agreement if CMC Biologics is unable to add additional manufacturing capacity on a timely basis, if certain manufacturing-related regulatory events do not occur before certain deadlines, or if the batch yield is below a certain threshold, in which case we are not obligated to pay CMC Biologics a termination payment and CMC Biologics will be obligated to refund the uncredited amounts of the upfront payment and reservation payment.

In addition, we may terminate the agreement unilaterally if we discontinue the development and commercialization of Andexanet alfa for regulatory, safety, efficacy or other commercial reasons, or if the projected market demand or gross margin of Andexanet alfa is below a minimum threshold. The termination provisions will obligate us to pay CMC Biologics a termination fee between $16.0 million and $30.0 million, depending on the date of termination. The termination fee is highest from 2015 through 2017, and then decreases through 2021. Any remaining upfront payments or reservation payments we have made, not yet credited against the purchase of batches, at the time of termination will be applied against the termination fee.

Under the lease accounting guidance, we determined that the agreement does not contain an embedded lease because the agreement does not convey the right to control the use of CMC Biologics’ facility. We based this determination on, among other factors, our right to physically access and/or operate CMC Biologics’ facility and one or more parties, other than us, and taking more than a minor amount of the output that will be produced or generated by the CMC Biologics facility during the term of our agreement.

Under the consolidation guidance, we determined that CMC Biologics is a VIE, but that we are not CMC Biologics’ primary beneficiary and therefore consolidation of CMC Biologics by us is not required. We based this determination on, among other factors, the upfront and reservation payment being akin to a form of subordinated financing, the fixed pricing terms of the arrangement creating variability that is absorbed by us, and that we do not have the power to direct the activities that most significantly affect the economic performance of CMC Biologics.

As of December 31, 2014, we have not provided financial, or other, support to CMC Biologics that was not previously contractually required. The upfront fees of $14.6 million recorded in prepaid expenses and other long-term assets and the batch initiation payments of $2.6 million recorded in prepaid expenses and other current assets in the consolidated balance sheets represents our maximum exposure to loss under this agreement at December 31, 2014. The upfront payment will be charged to research and development expense, or cost of sales, upon regulatory approval of Andexanet alfa, as batches are delivered over the term of the agreement. We are currently not able to quantify the exposure to losses associated with the fixed pricing terms of this agreement.

9. Asset Acquisition and License Agreements

Millennium Pharmaceuticals, Inc. ("Millennium")

In November 2003, we acquired patent rights and intellectual property to an ADP Receptor Antagonist Program ("ADP Program") and a Platelet Biology Program from Millennium. We are obligated to pay royalties on sales of products developed in the ADP Program if product sales are ever achieved.

In November 2007, we elected to continue our development of Betrixaban and the Factor Xa backup chemistry beyond December 1, 2007 and accordingly, paid $5.0 million in cash to Millennium, which was charged to research and development expense, as the rights had no alternative future use. We could owe Millennium up to $35.0 million upon the occurrence of specified events related to Betrixaban and royalties on sales of Factor Xa products, if such product sales are ever achieved.

Astellas Pharma, Inc. ("Astellas")

In June 2005, we licensed certain rights to research, develop and commercialize Syk inhibitors, including Cerdulatinib, from Astellas.

In 2011, under the terms of the license agreement and in connection with the Biogen Idec collaboration agreement to develop Syk, we paid $7.2 million in cash to Astellas, which was charged to research and development expense as the rights had no alternative future use.

We may be required to pay Astellas up to $71.5 million upon the achievement of certain regulatory, approval and sales events for each Syk inhibitor we develop. In the event that we enter into an agreement with a third party to develop and commercialize Syk inhibitors, we would be required to pay Astellas 20% of any payments (excluding royalties) received under the collaboration. These payments would be creditable against the aforementioned milestone payments. In addition, we are required to pay Astellas royalties for worldwide sales for any commercial Syk inhibitor product.

10. Restructuring Charge

In November 2012, as part of our strategy to better align our capital resources with our clinical development plan, we reduced our workforce by 23 employees, 16 of whom were immediately terminated, five of whom were terminated on January 31, 2013, and two of whom were terminated on April 30, 2013. The final restructuring charge of $698,000 includes severance and related costs associated with the termination of the employees. For the year ended December 31, 2013, we recorded a net restructuring charge of $79,000, of which $66,000 is included within research and development expense and $13,000 is included within general and administrative expense on our consolidated statements of operations. During the year ended December 31, 2013, we paid $223,000 of severance costs. There were no remaining amounts accrued for the restructuring liability at December 31, 2013.

11. Commitments and Contingencies

We conduct product research and development programs through a combination of internal and collaborative programs that include, among others, arrangements with universities, contract research organizations and clinical research sites. We have contractual arrangements with these organizations; however, these contracts are cancelable on 30 days' notice and our obligations under these contracts are largely based on services performed with the exception of our contract manufacturers. Non-cancelable purchase commitments with contract manufacturing organizations exclusive of the commercial supply agreement disclosed in footnote 8 amount to $25.3 million and $2.6 million in services to be performed in 2015 and 2016, respectively.

Facility Leases

We lease our corporate, laboratory and other facilities under an operating lease, which was extended in May 2010 through March 31, 2015. The 2010 lease amendment provided for tenant improvement allowances of $3.2 million, which are amortized as a reduction to rent expense on a straight-line basis over the lease term. In March 2014, we signed an amendment to the 2010 lease agreement for additional space and to extend the lease term through March 2020. The 2014 lease amendment provided for a tenant improvement allowance of $1.8 million, which is being amortized as a reduction to rent expense on a straight-line basis over the lease term and an early termination right effective March 2018 with nine months advance notice. The facility lease agreement, as amended, contains scheduled rent increases over the lease term. Under the 2014 lease amendment, we have an option to extend the lease for an additional three-year term. The related rent expense for this lease is calculated on a straight-line basis, with the difference recorded as deferred rent.

At December 31, 2014, our future minimum commitments under our non-cancelable operating leases were as follows (in thousands):

Year ending December 31:	
2015	$ 1,769
2016	2,070
2017	2,134
2018	2,200
2019	2,267
Thereafter	571
Total	$ 11,011

Rent expense was $1.2 million, $803,000 and $800,000 for the years ended December 31, 2014, 2013 and 2012, respectively.

Guarantees and Indemnifications

We indemnify each of our officers and directors for certain events or occurrences, subject to certain limits, while the officer or director is or was serving at our request in such capacity, as permitted under Delaware law and in accordance with our certificate of incorporation and bylaws. The term of the indemnification period lasts as long as an officer or director may be subject to any proceeding arising out of acts or omissions of such officer or director in such capacity.

The maximum amount of potential future indemnification is unlimited; however, we currently hold director and officer liability insurance. This insurance allows the transfer of risk associated with our exposure and may enable us to recover a portion of any future amounts paid. We believe that the fair value of these indemnification obligations is minimal. Accordingly, we have not recognized any liabilities relating to these obligations for any period presented.

12. Stock Based Compensation

Equity Incentive Plan

In January 2013, our Board of Directors adopted our 2013 Equity Incentive Plan, or the 2013 Plan, which became effective upon of the closing of our IPO in May 2013. The 2013 Plan has 935,213 shares of common stock available for future issuance as of December 31, 2014, subject to automatic annual increases beginning on January 1, 2014 through January 1, 2023. Further, all remaining shares available under the 2003 Equity Incentive Plan, or the 2003 Plan, were transferred to the 2013 Plan upon adoption. The 2013 Plan provides for the granting of incentive stock options, nonstatutory stock options, stock bonuses and rights to acquire restricted stock to employees, officers, directors and consultants. Incentive stock options may be granted with exercise prices of not less than 100% of the estimated fair value of our common stock and nonstatutory stock options may be granted with an exercise price of not less than 85% of the estimated fair value of the common stock on the date of grant. Stock options granted to a stockholder owning more than 10% of our voting stock must have an exercise price of not less than 110% of the estimated fair value of the common stock on the date of grant. Stock options are generally granted with terms of up to ten years and vest over a period of four years.

As of December 31, 2014, 6,949,108 shares of common stock were reserved under the 2013 Plan for the issuance of options and restricted stock.

A summary of Portola's stock option activity follows:

	Shares Available for Grant	Shares Subject to Outstanding Options	Weighted-Average Exercise Price Per Share
Balance at December 31, 2013	81,948	3,708,773	$ 9.43
Options authorized	2,045,785	–	–
Options granted	(1,358,013)	1,358,013	25.96
Options exercised	–	(652,125)	6.68
Options canceled	165,493	(165,493)	18.86
Balance at December 31, 2014	935,213	4,249,168	$ 14.77

Additional information related to the status of options at December 31, 2014, is as follows (aggregate intrinsic value in thousands):

	Shares	Weighted-Average Exercise Price Per Share	Remaining Contractual Life	Aggregate Intrinsic Value
Outstanding	4,249,168	$ 14.77	6.6	$ 57,709
Vested and expected to vest	4,106,671	$ 14.47	6.6	$ 57,009
Vested	2,503,676	$ 9.67	5.2	$ 46,722

The aggregate intrinsic values of options outstanding and exercisable, vested and expected to vest were calculated as the difference between the exercise price of the options and the fair value of our common stock as of December 31, 2014. The aggregate intrinsic value of options exercised was $12.5 million, $6.3 million and $451,000 for the years ended December 31, 2014, 2013 and 2012, respectively.

The total estimated grant date fair value of options vested during the years ended December 31, 2014, 2013 and 2012 was $9.0 million, $3.8 million and $3.0 million, respectively.

Additional information regarding our stock options outstanding and vested and exercisable as of December 31, 2014 is summarized below:

	Options Outstanding			Options Vested	
Exercise Prices	Number of Options Outstanding	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price per Share	Number of Options Vested	Weighted Average Exercise Price Per Share
$1.00 - $5.10	945,481	2.8	$ 4.21	945,481	$ 4.21
$5.30 - $9.00	1,068,191	6.0	8.07	927,581	8.21
$9.50 - $23.85	976,963	8.2	17.61	406,830	16.81
$24.39 - $26.67	861,050	8.6	25.13	178,702	25.04
$26.75 - $29.19	397,483	9.5	28.42	45,082	29.02
	4,249,168	6.6	$ 14.77	2,503,676	$ 9.67

Stock-based compensation expense, net of estimated forfeitures, is reflected in the consolidated statements of operations as follows (in thousands):

	Year Ended December 31,		
	2014	2013	2012
Research and development	$ 4,551	$ 2,295	$ 1,452
General and administrative	4,782	2,679	1,357
Total stock-based compensation	$ 9,333	$ 4,974	$ 2,809

As of December 31, 2014, total unamortized employee and nonemployee stock-based compensation was $21.8 million, which is expected to be recognized over the remaining estimated vesting period of 2.8 years. The weighted-average grant date fair value of employee options granted during the years ended December 31, 2014, 2013 and 2012 was $15.73, $12.46 and $5.90 per share, respectively.

Valuation Assumptions

The employee stock-based compensation expense was determined using the Black-Scholes option valuation model. Option valuation models require the input of subjective assumptions and these assumptions can vary over time. The risk-free rate is based on U.S. Treasury zero-coupon issues with remaining terms similar to the expected terms of the awards. The expected term of employee options granted is determined using the simplified method (based on the midpoint between the vesting date and the end of the contractual term). As sufficient trading history does not yet exist for our common stock, therefore our estimate of expected volatility is based on the volatility of other companies with similar products under development, market, size and other factors. To date, we have not declared or paid any cash dividends and do not have any plans to do so in the future. Therefore, we used an expected dividend yield of zero.

The following table illustrates the weighted-average assumptions for the Black-Scholes option-pricing model used in determining the fair value of options granted to employees:

	Year Ended December 31,		
	2014	2013	2012
Risk-free interest rate	1.81% - 1.89%	1.43%	1.10%
Expected life	6.0 years	6.0 years	6.0 years
Expected volatility	69% - 80%	79%	72%
Dividend yield	–	–	–

Options Granted to Nonemployees

We have granted options to purchase shares of common stock to consultants in exchange for services performed. We granted options to purchase 33,888, 32,943 and 6,380 shares with average exercise prices of $25.41, $19.88 and $7.00 per share, respectively, during the years ended December 31, 2014 2013 and 2012, respectively. These options vest upon grant or various terms up to four years. We recognized non-employees stock compensation expense of $769,000, $775,000 and $144,000 during the years ended December 31, 2014, 2013 and 2012, respectively. The fair value of non-employees' options was measured using the Black-Scholes option-pricing model reflecting the same assumptions as applied to employee options in each of the reported years, other than the expected life assumption, which is assumed to be the remaining contractual life of the option.

Employee Stock Purchase Plan

The Board of Directors adopted the 2013 Employee Stock Purchase Plan, effective upon the completion of Portola's initial public offering of its common stock. Portola reserved a total of 1,000,000 shares of common stock for issuance under the plan. Eligible employees may purchase common stock at 85 percent of the lesser of the fair market value of Portola's common stock on the first or last day of the offering period. The reserve for shares available under the plan automatically increases on January 1st each year, beginning in 2014, by an amount equal to 2 percent of the total number of outstanding shares of our common stock on December 31st of the preceding fiscal year.

The following table illustrates the weighted-average assumptions for the Black-Scholes option-pricing model used in determining the fair value of ESPP purchase rights granted to employees:

	Year Ended December 31,	
	2014	2013
Risk-free interest rate	0.08%	0.10%
Expected life	0.5 years	0.4 years
Expected volatility	73%	62%
Dividend yield	–	–

13. Net (Loss) Income per Share Attributable to Common Stockholders

The following outstanding shares of common stock equivalents were excluded from the computation of diluted net (loss) income per share attributable to common stockholders for the periods presented because including them would have been antidilutive:

	Year Ended December 31,		
	2014	2013	2012
Convertible preferred stock	–	–	24,026,797
Stock options to purchase common stock	4,249,168	3,708,773	1,653,298
Convertible preferred stock warrants	–	–	81,075
Common stock warrants	6,240	82,575	1,500

The following table sets forth the computation of our basic and diluted net (loss) income per share attributable to common stockholders (in thousands, except share and per share data):

	Year Ended December 31,		
	2104	2013	2012
Net (loss) income	$ (137,125)	$ (83,352)	$ 11,366
Noncumulative dividends on convertible preferred stock	–	–	(11,366)
Net loss attributable to common stockholders, basic	(137,125)	(83,352)	–
Adjustment to undistributed earnings allocated to participating securities	–	–	–
Net loss attributable to common stockholders, diluted	$ (137,125)	$ (83,352)	$ –
Shares used in computing net loss per share attributable to common stockholders, basic	42,977,463	22,842,443	1,350,939
Dilutive effect of common stock options	–	–	697,928
Shares used in computing net loss per share attributable to common stockholders, diluted	42,977,463	22,842,443	2,048,867
Net loss per share attributable to common stockholders:			
Basic	$ (3.19)	$ (3.65)	$ –
Diluted	$ (3.19)	$ (3.65)	$ –

14. Employee Benefit Plan

We sponsor a 401(k) Plan, which stipulates that eligible employees can elect to contribute to the 401(k) Plan, subject to certain limitations of eligible compensation. We match employee contributions up to a maximum of $2,000, $500 and $500 per employee for the years ended December 31, 2014, 2013 and 2012, respectively. During the years ended December 31, 2014, 2013 and 2012, we recognized total expense of $153,000, $59,000 and $31,000, respectively.

15. Income Taxes

We did not record a tax provision for the years ended December 31, 2014, 2013 and 2012. The effective tax rate of our provision for income taxes differs from the federal statutory rate as follows:

	Year Ended December 31,		
	2014	2013	2012
Federal statutory income tax rate	34.0%	34.0%	34.0%
State income taxes, net of federal benefit	11.2	0.4	22.8
Federal and state research credits	2.7	3.4	0.8
Stock based compensation	(1.6)	(0.2)	0.4
Other	(0.1)	(0.5)	(0.1)
Change in valuation allowance	(46.2)	(37.1)	(57.9)
	0.0%	0.0%	0.0%

In 2012, we did not record an income tax provision on pre-tax income because we incurred a current taxable loss for federal income tax purposes and had available tax credits to offset all state income tax. Tax credits were used in lieu of net operating losses because in 2012 state law suspended their use. Our valuation allowance at December 31, 2014 and 2013 appropriately considers the balances of both net operating losses and deferred revenue.

Significant components of our deferred tax assets are as follows (in thousands):

	December 31,	
	2014	2013
Deferred tax assets:		
Federal and state net operating loss carryforwards	$ 146,725	$ 102,478
Federal and state research tax credit carryforwards	15,337	10,750
Deferred revenue	12,523	1,755
Stock options	3,776	2,895
Capitalized acquisition costs	1,322	1,295
Other	3,589	654
Total deferred tax assets	183,272	119,827
Valuation allowance	(183,272)	(119,827)
Net deferred tax assets	$ –	$ –

Realization of the deferred tax assets is dependent upon the generation of future taxable income, if any, the amount and timing of which are uncertain. Based on available objective evidence, including the fact that we have incurred significant losses in almost every year since our inception, management believes it is more likely than not that our deferred tax assets are not recognizable. Accordingly, deferred tax assets have been fully offset by a valuation allowance. The valuation allowance increased by $63.5 million for the year ended December 31, 2014. The valuation allowance increased by $30.7 million for the year ended December 31, 2013.

As of December 31, 2014, we had net operating loss carryforwards for federal income tax purposes of approximately $364.4 million and federal research tax credits of approximately $15.2 million, which expire at various dates in the period from 2024 to 2034. We also have California net operating loss carry forwards of approximately $449.6 million which expire at various dates in the period from 2018 to 2034 and California research tax credits of $3.8 million. Utilization of the net operating loss carryforwards and credits will be subject to an annual limitation due to the ownership change limitations provided by the Internal Revenue Code of 1986, as amended and similar state provisions. The annual limitation may result in the expiration of net operating losses and credits before utilization.

Uncertain Tax Positions

We have not been audited by the Internal Revenue Service or any state tax authority. We are subject to taxation in the United States. Because of the net operating loss and research credit carryforwards, substantially all of our tax years, from 2003 through 2013, remain open to U.S. federal and California state tax examinations.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows (in thousands):

	Year Ended December 31,		
	2014	2013	2012
Unrecognized tax benefits, beginning of period	$ 2,048	$ 1,435	$ 1,344
Gross increases - current period tax positions	858	619	91
Gross decreases - tax position in prior period	–	(6)	–
Unrecognized tax benefits, end of period	$ 2,906	$ 2,048	$ 1,435

The amount of unrecognized income tax benefits that, if recognized, would affect our effective tax rate was $365,000 as of December 31, 2014 and 2013. If the $2.9 million and $2.0 million of unrecognized income tax benefits as of December 31, 2014 and 2013, respectively, is recognized, there would be no impact to the effective tax rate as any change will fully offset the valuation allowance. We believe that it is reasonably possible that a decrease of $365,000 in unrecognized tax benefits related to state exposures is necessary within the coming year as a result of a lapse of the state statute of limitations.

16. Related Party Transactions

Our former President and Chief Executive Officer, who is currently a member of our board of directors, is also a co-founder and member of the board of directors of Global Blood Therapeutics, Inc. ("Global Blood"), and a member of the board of directors of MyoKardia, Inc. ("MyoKardia"). In November 2012, we entered into Master Services Agreements with Global Blood and MyoKardia under which we provide certain consulting, preclinical, laboratory and clinical research related services to each of these companies. For the years ended December 31, 2014, 2013 and 2012, we recorded a reduction in research and development expense of $594,000, $816,000 and $57,000, respectively, related to owed to us by Global Blood and Myokardia under the Master Services Agreements.

As of December 31, 2014 and 2013, receivables from these related parties in the amount of $40,000 and $394,000 , respectively, are included in prepaid expenses and other current assets on the consolidated balance sheet.

17. Subsequent Events

In January 2015, the Compensation Committee of the Board approved for Portola's named executive officers performance stock unit (PSU) awards. Each PSU represents a contingent right to receive one share of the Company's Common Stock. At any time over the four years following the date of grant, half of the shares subject to each PSU will be earned when the average closing price of Portola's stock on the NASDAQ Global Select Market is above $50.00 per share for 45 consecutive trading days, and an additional half of the shares will be earned when the average closing price of Portola's stock is above $60 per share for 45 consecutive trading days during such four year period. Any shares earned will then vest on the one year anniversary of the date such shares were earned, subject to continuous service as of each such date.

18. Quarterly Financial Data

The following table presents certain unaudited quarterly financial information. This information has been prepared on the same basis as the audited consolidated financial statements and includes all adjustments (consisting only of normal recurring adjustments) necessary to present fairly the unaudited quarterly results of operations set forth herein.

	2014				2013			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Collaboration and license revenue	$ 2,372	$ 2,415	$ 2,427	$ 2,411	$ 3,108	$ 2,601	$ 2,766	$ 2,056
Operating expenses	$ (33,396)	$ (33,920)	$ (38,204)	$ (41,671)	$ (20,761)	$ (24,541)	$ (21,995)	$(27,412)
Net loss	$ (30,726)	$ (31,350)	$ (35,793)	$ (39,256)	$ (18,142)	$ (21,598)	$ (18,550)	$(25,062)
Net loss per share:								
Basic and diluted	$ (0.75)	$ (0.76)	$ (0.86)	$ (0.82)	$ (12.94)	$ (1.47)	$ (0.53)	$ (0.63)

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in our reports under the Securities Exchange Act of 1934, as amended, or the Exchange Act, and the rules and regulations thereunder, is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow for timely decisions regarding required disclosure. In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

As required by Rule 13a-15(b) under the Exchange Act, our management, under the supervision and with the participation of our principal executive officer and principal financial officer, has evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act) as of December 31, 2014. Based on such evaluation, our Chief Executive Officer and Chief Financial Officer have concluded that, as of December 31, 2014, our disclosure controls and procedures were effective at the reasonable assurance level.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, our Chief Executive Officer and Chief Financial Officer to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in accordance with generally accepted accounting principles and includes those policies and procedures that (1) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of our assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that our receipts and expenditures are being made only in accordance with authorizations of our management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of our assets that could have a material effect on the consolidated financial statements.

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on criteria established in "Internal Control—Integrated Framework (2013)" issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Our management concluded that our internal control over financial reporting was effective as of December 31, 2014.

Our independent registered public accounting firm, Ernst & Young LLP, has audited the effectiveness of our internal control over financial reporting as of December 31, 2014 as stated in their report which is included herein.

Limitations on Effectiveness of Controls and Procedures and Internal Control over Financial Reporting

In designing and evaluating the disclosure controls and procedures and internal control over financial reporting, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives. In addition, the design of disclosure controls and procedures and internal control over financial reporting must reflect the fact that there are resource constraints and that management is required to apply judgment in evaluating the benefits of possible controls and procedures relative to their costs.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal controls over financial reporting identified in connection with the evaluation required by Rule 13a-15(d) and 15d-15(d) of the Exchange Act that occurred during the quarter ended December 31, 2014 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders of Portola Pharmaceuticals, Inc.

We have audited Portola Pharmaceuticals, Inc.'s internal control over financial reporting as of December 31, 2014, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). Portola Pharmaceuticals, Inc.'s management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's Annual Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the company's internal control over financial reporting based on our audit.

We conducted our audit 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 effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, Portola Pharmaceuticals, Inc. maintained, in all material respects, effective internal control over financial reporting as of December 31, 2014, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of Portola Pharmaceuticals, Inc. as of December 31, 2014 and 2013, and the related consolidated statements of operations, comprehensive income (loss), convertible preferred stock and stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2014 of Portola Pharmaceuticals, Inc. and our report dated March 2, 2015, expressed an unqualified opinion thereon.

/s/ Ernst & Young LLP
Redwood City, California
March 2, 2015

PART III

Certain information required by Part III is omitted from this annual report on Form 10-K and is incorporated herein by reference to our definitive Proxy Statement for our 2015 Annual Meeting of Stockholders, or the Proxy Statement, which we intend to file pursuant to Regulation 14A of the Securities Exchange Act of 1934, as amended, within 120 days after December 31, 2013.

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this item concerning our directors is incorporated by reference to the information set forth in the sections titled "Election of Directors" and "Corporate Governance" in our Proxy Statement. Information required by this item concerning our executive officers is incorporated by reference to the information set forth in the section entitled "Executive Officers of the Company" in our Proxy Statement. Information regarding Section 16 reporting compliance is incorporated by reference to the information set forth in the section entitled "Section 16(a) Beneficial Ownership Reporting Compliance" in our Proxy Statement.

Our written code of ethics applies to all of our directors and employees, including our executive officers, including without limitation our principal executive officer, principal financial officer, principal accounting officer or controller or persons performing similar functions. The code of ethics is available on our website at http://www.portola.com in the Investors section under "Corporate Governance." Changes to or waivers of the code of ethics will be disclosed on the same website. We intend to satisfy the disclosure requirement under Item 5.05 of Form 8-K regarding any amendment to, or waiver of, any provision of the code of ethics in the future by disclosing such information on our website.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item regarding executive compensation is incorporated by reference to the information set forth in the sections titled "Executive Compensation" in our Proxy Statement.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this item regarding security ownership of certain beneficial owners and management is incorporated by reference to the information set forth in the section titled "Security Ownership of Certain Beneficial Owners and Management" and "Equity Compensation Plan Information" in our Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item regarding certain relationships and related transactions and director independence is incorporated by reference to the information set forth in the sections titled "Certain Relationships and Related Party Transactions" and "Election of Directors", respectively, in our Proxy Statement.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item regarding principal accountant fees and services is incorporated by reference to the information set forth in the section titled "Principal Accountant Fees and Services" in our Proxy Statement.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a) The following documents are filed as part of this report:

(1) FINANCIAL STATEMENTS

Financial Statements—See Index to Financial Statements at Item 8 of this report.

(2) FINANCIAL STATEMENT SCHEDULES

Financial statement schedules have been omitted in this report because they are not applicable, not required under the instructions, or the information requested is set forth in the consolidated financial statements or related notes thereto.

(b) Exhibits. The exhibits listed in the accompanying index to exhibits are filed as part of, or incorporated by reference into, this report.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of South San Francisco, State of California, on the 2nd day of March 2015.

PORTOLA PHARMACEUTICALS, INC.

By: /s/ WILLIAM LIS
William Lis
Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints William Lis and Mardi C. Dier, jointly and severally, as his or her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for him or her, and in his or her name, place and stead, in any and all capacities, to sign any and all amendments to this report, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises hereby ratifying and confirming all that said attorneys-in-fact and agents, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/ S / WILLIAM LIS William Lis	Chief Executive Officer and Director (Principal Executive Officer)	March 2, 2015
/ S / MARDI C. DIER Mardi C. Dier	Chief Financial Officer (Principal Financial and Accounting Officer)	March 2, 2015
/ S / HOLLINGS C. RENTON Hollings C. Renton	Chairman of the Board of Directors	March 2, 2015
/ S / CHARLES J. HOMCY, M.D. Charles J. Homcy, M.D.	Director	March 2, 2015
/ S / JEFFREY W. BIRD, M.D., PH.D. Jeffrey W. Bird, M.D., Ph.D.	Director	March 2, 2015
/ S / LAURA BREGE Laura Brege	Director	March 2, 2015
/ S / JOHN H. JOHNSON John H. Johnson	Director	March 2, 2015
/ S / H. WARD WOLFF H. Ward Wolff	Director	March 2, 2015

EXHIBIT INDEX

Exhibit Number	Exhibit Description	Incorporation By Reference			
		Form	SEC File No.	Exhibit	Filing Date
3.1	Amended and Restated Certificate of Incorporation of Portola Pharmaceuticals, Inc.	8-K	001-35935	3.1	5/28/2013
3.2	Amended and Restated Bylaws of Portola Pharmaceuticals, Inc.	8-K	001-35935	3.2	5/28/2013
4.1	Form of Common Stock Certificate of Portola Pharmaceuticals, Inc.	S-1	333-187901	4.1	5/17/2013
4.2	Warrant to Purchase Shares of Series A Preferred Stock by and between the registrant and General Electric Capital Corporation, dated January 21, 2005.	10-Q	001-35935	4.4	11/06/13
4.3	Warrant to Purchase Shares of Series B Preferred Stock by and between the registrant and Hercules Technology Growth Capital, Inc., dated September 29, 2006.	10-Q	001-35935	4.5	11/06/13
4.4	Warrant to Purchase Shares of Series B Preferred Stock by and between the registrant and Comerica Incorporated, dated September 26, 2006.	10-Q	001-35935	4.6	11/06/13
4.5	Warrant to Purchase Shares of Common Stock by and between the registrant and Laurence Shushan and Magdalena Shushan Acosta, Trustees, The Laurence and Magdalena Shushan Family Trust, Under Agreement Dated October 8, 1997, dated December 15, 2006.	10-Q	001-35935	4.7	11/06/13
4.6	Warrant to Purchase Shares of Common Stock by and between the registrant and HCP Life Science Assets TRS, LLC, dated December 15, 2006.	10-Q	001-35935	4.8	11/06/13
4.7	Warrant to Purchase Shares of Common Stock by and between the registrant and Bristow Investments, L.P., dated December 15, 2006.	10-Q	001-35935	4.9	11/06/13
10.1	Form of Indemnity Agreement between the Registrant and its directors and officers.	S-1	333-187901	10.1	4/12/2013
10.2+	Portola Pharmaceuticals, Inc. 2003 Equity Incentive Plan, as amended, and Form of Stock Option Grant Notice, Option Agreement and Form of Notice of Exercise.	S-1	333-187901	10.2	4/12/2013
10.3+	Portola Pharmaceuticals, Inc. 2013 Equity Incentive Plan and Form of Stock Option Agreement and Form of Stock Option Grant Notice thereunder.	S-1	333-187901	10.3	4/12/2013
10.4+	Form of Executive Severance Benefits Agreement (amends and restates Form of 2006 Executive Change in Control Severance Benefits Agreement)	10-Q	001-35935	10.4	8/06/2014
10.5+	Amended Non-Employee Director Compensation Policy.	10-Q	001-35935	10.5	5/13/2014
10.6	Third Amended and Restated Investor Rights Agreement, dated as of November 11, 2011, by and among the registrant and certain of its stockholders.	S-1	333-187901	10.6	4/12/2013
10.7†	License and Collaboration Agreement by and between the registrant and Biogen Idec MA Inc., dated as of October 26, 2011.	S-1	333-187901	10.7	5/7/2013
10.8†	License Agreement by and between the registrant and Millennium Pharmaceuticals, Inc., dated as of August 4, 2004.	S-1	333-187901	10.8	4/12/2013
10.9†	Asset Purchase Agreement by and between the registrant and Millennium Pharmaceuticals, Inc., dated as of November 7, 2003.	S-1	333-187901	10.9	4/12/2013
10.10†	Letter by and between the registrant and Millennium Pharmaceuticals, Inc., dated as of December 6, 2005.	S-1	333-187901	10.10	4/12/2013
10.11†	Second Amended and Restated License Agreement by and between the registrant and Astellas Pharma, Inc., dated as of December 20, 2010.	S-1	333-187901	10.11	4/12/2013

Exhibit Number	Exhibit Description	Incorporation By Reference			
		Form	SEC File No.	Exhibit	Filing Date
10.12†	Clinical Collaboration Agreement by and among the registrant, Bristol-Myers Squibb Company and Pfizer Inc., dated as of October 16, 2012.	S-1	333-187901	10.12	4/12/2013
10.13	Lease by and between the registrant and Britannia Pointe Grand Limited Partnership, dated as of December 15, 2006.	S-1	333-187901	10.13	4/12/2013
10.14	First Amendment to Lease by and between the registrant and Britannia Pointe Grand Limited Partnership, dated as of May 21, 2010.	S-1	333-187901	10.14	4/12/2013
10.15	Offer Letter by and between the Registrant and William Lis, dated as of April 29, 2008.	S-1	333-187901	10.15	4/12/2013
10.16	Offer Letter by and between the Registrant and John T. Curnutte, M.D., Ph.D., dated as of January 6, 2011.	S-1	333-187901	10.16	4/12/2013
10.17	Offer Letter by and between the Registrant and Mardi C. Dier, dated as of July 28, 2006.	S-1	333-187901	10.17	4/12/2013
10.19	Portola Pharmaceuticals, Inc. 2013 Employee Stock Purchase Plan.	S-1	333-187901	10.19	4/12/2013
10.20	Master Contract Services Agreement for Preclinical and Clinical Services by and between the Registrant and PPD Development, LP, dated as of January 2, 2012, as amended by Amendment No.1 between the registrant and PPD Development, LLC (formerly PPD Development, LP).	S-1	333-187901	10.20	4/12/2013
10.22	Second Amendment to Lease made and entered into as of the 14th day of March 2014, by and between Portola Pharmaceuticals, Inc. and Britannia Pointe Grand Limited Partnership.	8-K	001-35935	10.22	3/19/2014
10.23†	First Amendment of the License and Collaboration Agreement made and effective as of April 7, 2014 by and between Biogen Idec MA Inc. and Portola Pharmaceuticals, Inc.	10-Q	001-35935	10.23	5/13/2014
10.24†	Commercial Supply (Manufacturing Services) Agreement between CMC ICOS Biologics, Inc. and Portola Pharmaceuticals, Inc. effective as of July 1, 2014.	10-Q	001-35935	10.24	11/10/2014
10.25+*	Form of Restricted Stock Unit Award Grant Notice and Award Agreement—2013 Equity Incentive Plan.				
10.26+*	Form of Performance Stock Unit Award Grant Notice and Award Agreement—2013 Equity Incentive Plan.				
23.1*	Consent of Independent Registered Public Accounting Firm.				
24.1	Power of Attorney (see signature page).				
31.1*	Certification of Principal Executive Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended.				
31.2*	Certification of Principal Financial Officer pursuant to Rule 13a-14(a) or Rule 15d-14(a) of the Securities Exchange Act of 1934, as amended.				
32.1*	Certification of Principal Executive Officer and Principal Financial Officer pursuant to Rule 13a-14(b) of the Securities Exchange Act of 1934, as amended, and 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.[1]				
101.INS	XBRL Instance Document. [2]				
101.SCH	XBRL Taxonomy Extension Schema Document. [2]				
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document. [2]				
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document. [2]				
101.LAB	XBRL Taxonomy Extension Label Linkbase Document. [2]				
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document. [2]				

† Confidential Treatment Granted

+ Management contract or compensatory plan
* Filed herewith

(1) This certification accompanies the Form 10-K to which it relates, is not deemed filed with the Securities and Exchange Commission and is not to be incorporated by reference into any filing of the Registrant under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended (whether made before or after the date of the Form 10-K), irrespective of any general incorporation language contained in such filing.

(2) Pursuant to applicable securities laws and regulations, the Registrant is deemed to have complied with the reporting obligation relating to the submission of interactive data files in such exhibits and is not subject to liability under any anti-fraud provisions of the federal securities laws as long as the Registrant has made a good faith attempt to comply with the submission requirements and promptly amends the interactive data files after becoming aware that the interactive data files fail to comply with the submission requirements. These interactive data files are deemed not filed or part of a registration statement or report for purposes of sections 11 or 12 of the Securities Act of 1933, as amended, are deemed not filed for purposes of section 18 of the Securities Exchange Act of 1934, as amended, and otherwise are not subject to liability under these sections.

CORPORATE INFORMATION

MANAGEMENT TEAM

WILLIAM LIS
Chief Executive Officer

JOHN T. CURNUTTE, M.D., Ph.D.
Executive Vice President, Research and Development

MARDI C. DIER
Executive Vice President, Chief Financial Officer

ALEXANDER M. GOLD, M.D., F.A.C.C.
Senior Vice President, Clinical Development

MARK W. GOSSETT
Senior Vice President, Commercial

STACY MARKEL
Senior Vice President, Human Resources

R. ANDREW RAMELMEIER, Ph.D.
Senior Vice President, Biologics Technical Operations

PETER STRUMPH
Senior Vice President, Technical and Clinical Operations

MICHELE D. BRONSON, Ph.D.
Vice President, Program Management

JANICE CASTILLO
Vice President, Regulatory Affairs

PAMELA CONLEY, Ph.D.
Vice President, Biology

JEET MAHAL
Vice President, Business Development

ANJALI PANDEY, Ph.D.
Vice President, Chemistry

BOARD OF DIRECTORS

JEFFREY W. BIRD, M.D., Ph.D.
Managing Director, Sutter Hill Ventures

LAURA BREGE
President and Chief Executive Officer, Nodality, Inc.

DENNIS FENTON, Ph.D.
Owner and Chief Executive Officer, Fenton and Associates

NICHOLAS G. GALAKATOS, Ph.D.
Co-Founder and Managing Director, Clarus Ventures

CHARLES J. HOMCY, M.D.
Former President and Chief Executive Officer,
Portola Pharmaceuticals, Inc.

JOHN H. JOHNSON
Founder, Plum Brook Advisors

WILLIAM LIS
Chief Executive Officer, Portola Pharmaceuticals, Inc.

HOLLINGS C. RENTON
Chairman of the Board

H. WARD WOLFF
Executive Vice President and Chief Financial Officer,
Sangamo BioSciences, Inc.

CORPORATE INFORMATION

CORPORATE COUNSEL COOLEY LLP

3175 Hanover Street
Palo Alto, CA 94304
Phone: 650.843.5000

INDEPENDENT AUDITORS

Ernst & Young LLP
275 Shoreline Drive, Suite 600
Redwood City, CA 94065
Phone: 650.802.4500

INVESTOR RELATIONS

Inquiries and requests for information, including copies of Portola's Annual Report on Form 10-K may be obtained without charge by contacting Investor Relations or visiting our website.

Portola Pharmaceuticals Inc.
270 E. Grand Avenue
South San Francisco, CA 94080
Phone: 650.246.7000
Fax: 650.246.7376
Email: IR@portola.com
www.portola.com

TRANSFER AGENT

For any inquiries regarding lost stock certificates, address changes, and changes of ownership or name in which shares are held, please contact our transfer agent.

American Stock Transfer & Trust Company
6201 15th Avenue
Brooklyn, NY 11219
www.amstock.com
Phone: 800.937.5449
Email: info@amstock.com

ANNUAL MEETING

Tuesday, June 16, 10:00 AM PT
Portola Pharmaceuticals, Inc.
270 E. Grand Avenue
South San Francisco, CA 94080

This annual report contains forward-looking statements that include, but are not limited to, statements regarding Portola's business, clinical development plans and regulatory processes for its product candidates, anticipated growth in the market for anticoagulants, and the potential efficacy, safety and activity of andexanet alfa, betrixaban and cerdulatinib. Risks that contribute to the uncertain nature of the forward-looking statements include: the accuracy of Portola's estimates regarding its ability to initiate and/or complete its clinical trials; the success of Portola's clinical trials and the demonstrated efficacy of Portola's product candidates thereunder; the accuracy of Portola's estimates regarding its expenses and capital requirements; regulatory developments in the United States and foreign countries; Portola's ability to obtain and maintain intellectual property protection for its product candidates; and the loss of key scientific or management personnel. For a more detailed description of the risks that impact these forward looking statements, please refer to the company's most recent filings with the Securities and Exchange Commission. Portola undertakes no obligation to update these forward-looking statements.

PORTOLA
PHARMACEUTICALS

INNOVATIVE SCIENCE. PATIENT FOCUSED.

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